

EASTERN—WESTERN
ARCTIC SEA ICE ANALYSIS
1992

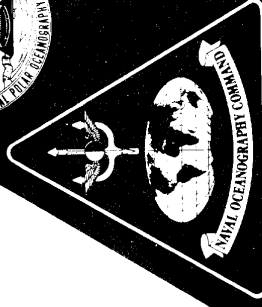
PREPARED BY
NAVAL POLAR OCEANOGRAPHY CENTER
SUITLAND, MD

PREPARED UNDER AUTHORITY OF
COMMANDER, NAVAL OCEANOGRAPHY COMMAND
STENNIS SPACE CENTER, MS 39529-5000

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FOREWORD

The U.S. Navy has a long and eventful history of polar exploration from Robert E. Peary in the Arctic to Richard E. Byrd in the Antarctic. In recent years the strategic importance and expanded research pursuits in these areas have resulted in greater national and international requirements for environmental information. Since 1976, the National Oceanic and Atmospheric Administration (NOAA) and the Navy have worked together at the Joint Ice Center (JIC) in Suitland, Maryland. By combining the Navy's experience in observing and recording sea-ice data, and NOAA's expertise in satellite data collection and interpretation, the JIC has been able to keep pace with that demand in both polar regions.

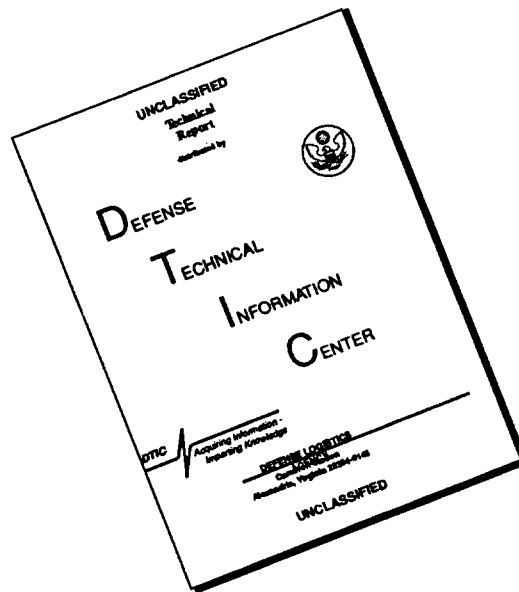
This publication is the 19th edition of the Arctic sea-ice atlases prepared by the JIC. The atlas contains weekly charts depicting Northern Hemisphere and Great Lakes ice conditions and extent. The significant use of high resolution satellite imagery, combined with valuable ice reconnaissance data from various sources, has greatly improved the accuracy of these analyses.

The purpose of this atlas is to provide the user with reliable weekly hemispheric ice analyses. Both Navy and NOAA personnel with considerable experience in sea-ice analysis prepare the analyses. The following procedures have been developed to ensure the quality of the products:

- a. Conventional shore station, ship, and aerial reconnaissance observations are plotted and evaluated.
- b. Satellite data from different sensors is compared and analyzed for ice information content. Table 1, located on the inside back cover, summarizes the data availability for 1992.
- c. A final product results from a and b. However, where insufficient data is available, an estimated boundary will be depicted. Meteorological data and computer generated ice drift vectors are used to determine the estimated ice position.

NAVY/NOAA Joint Ice Center
Naval Polar Oceanography Center
4301 Suitland Road
Washington, DC 20395-5180

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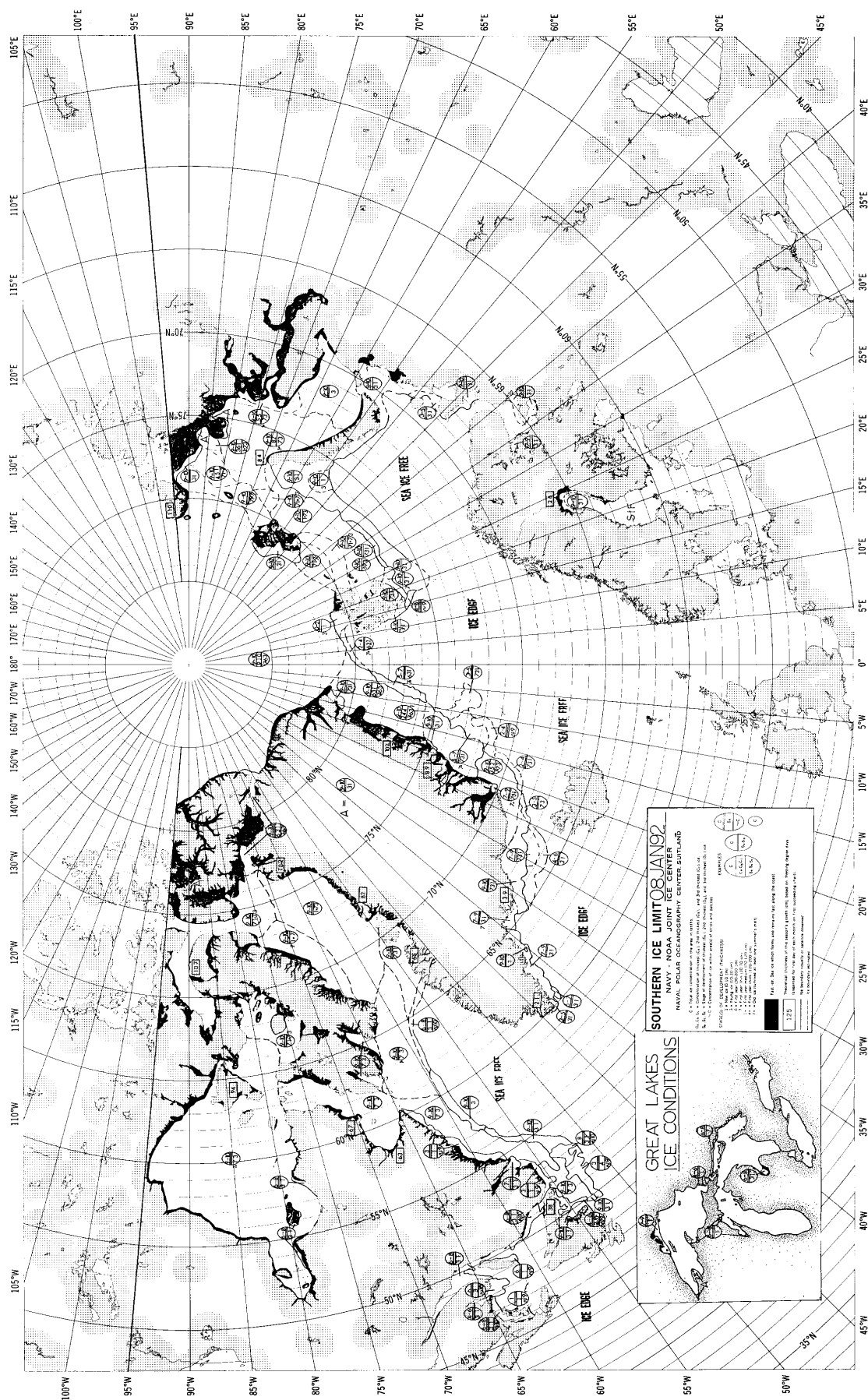
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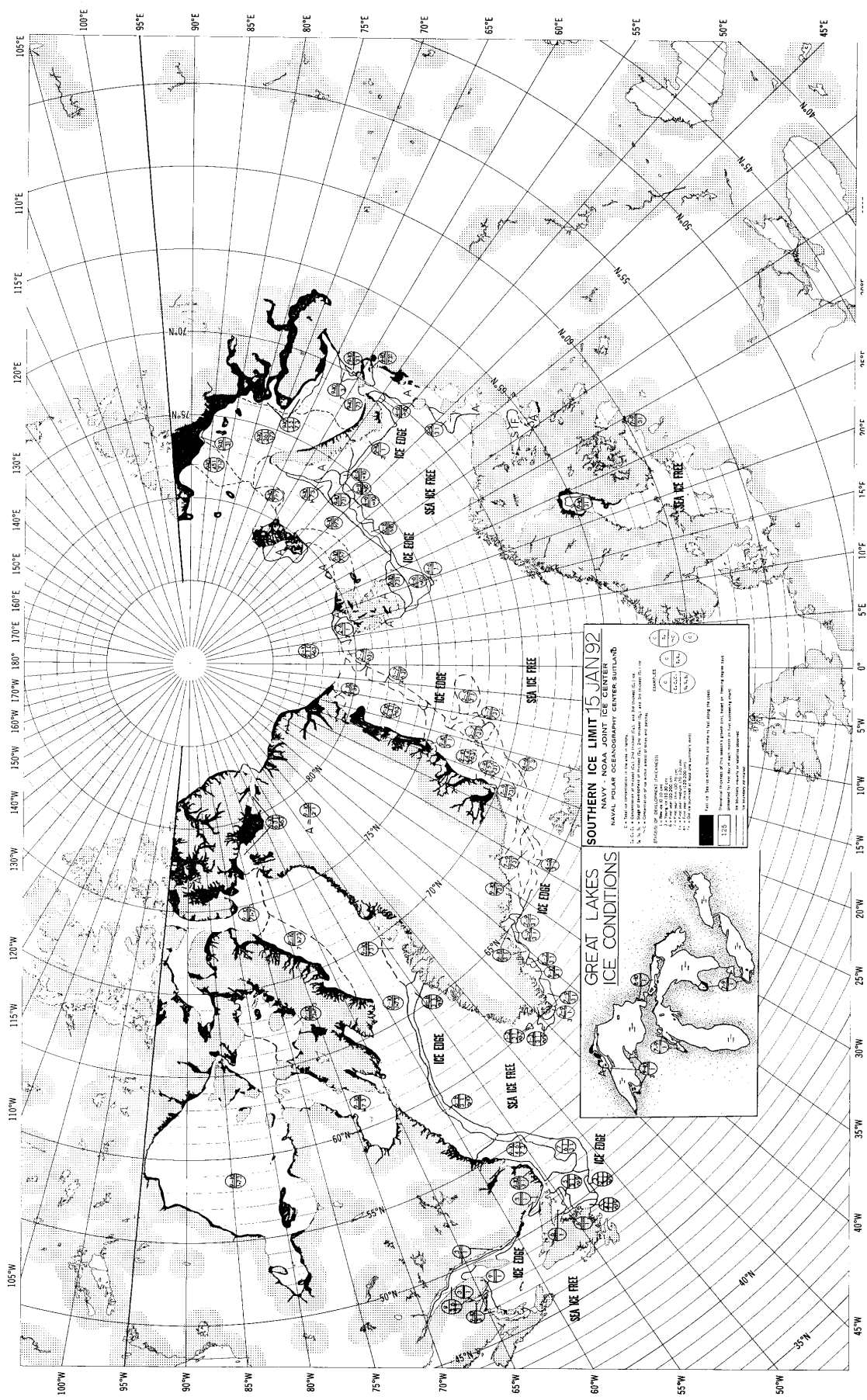
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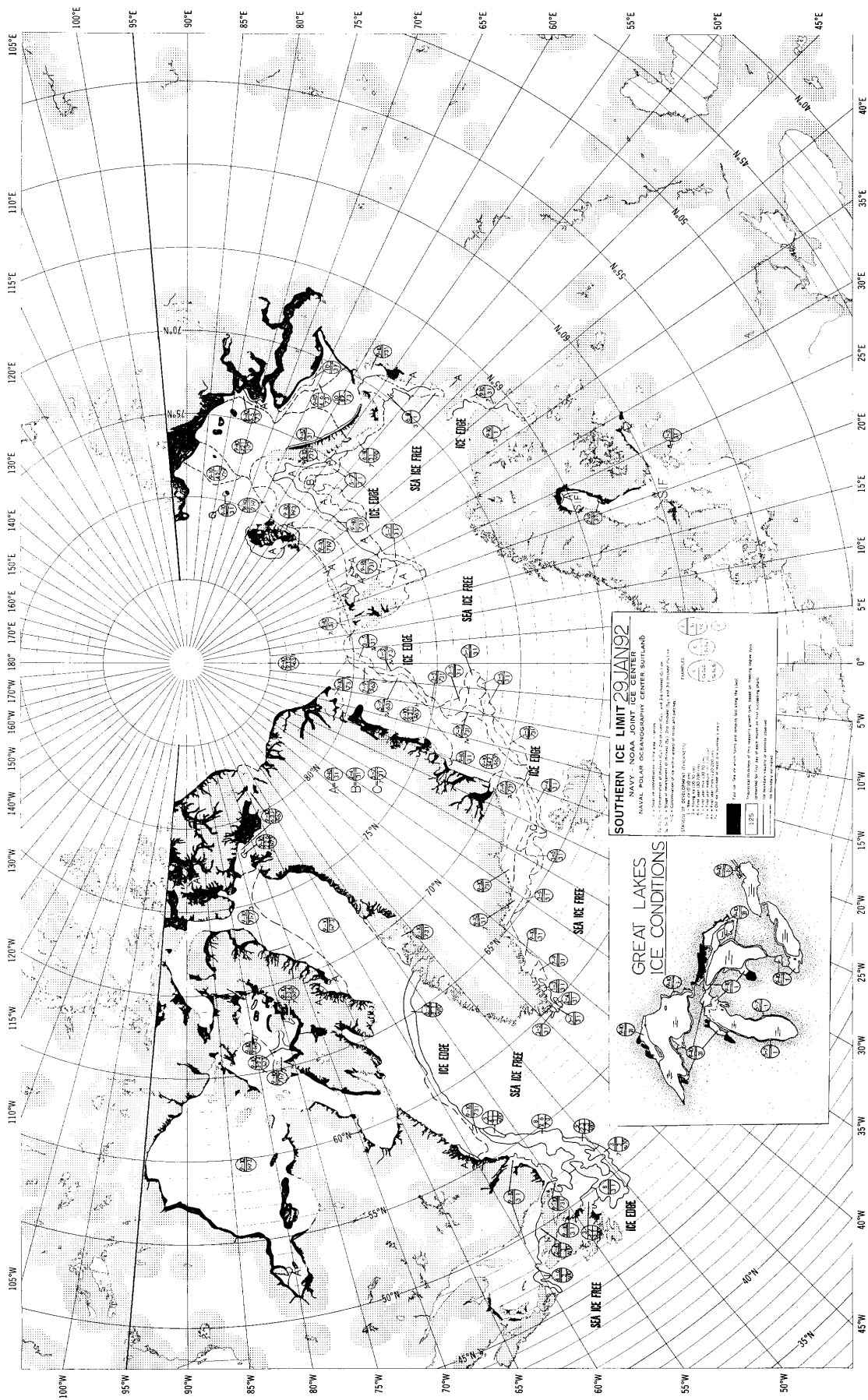
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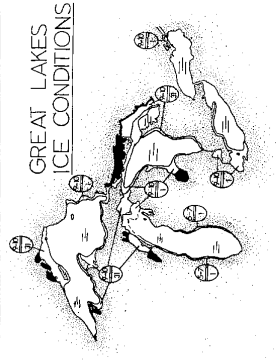
1. AGENCY USE ONLY (Leave blank)		2. REPORT DATE	3. REPORT TYPE AND DATES COVERED	
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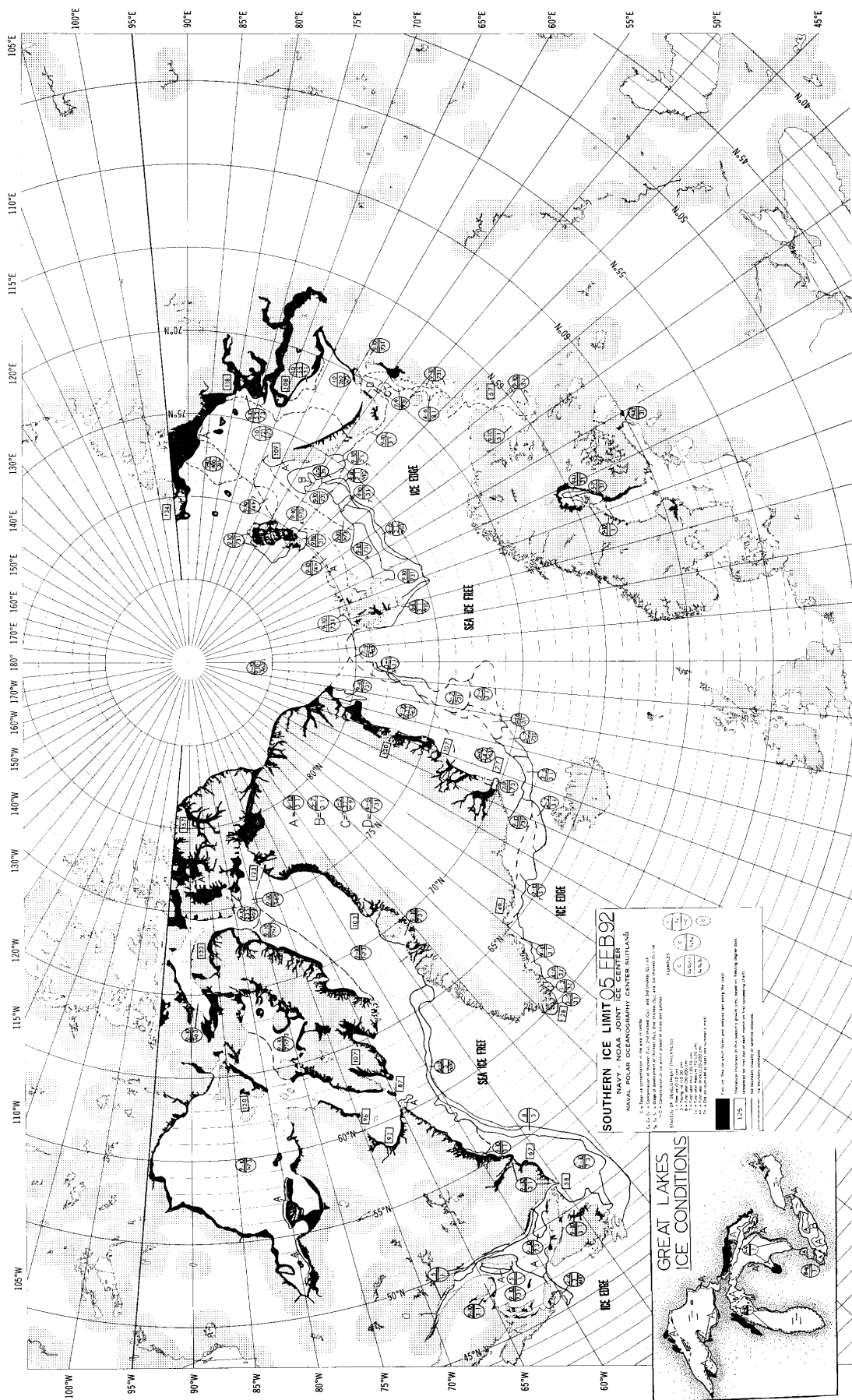






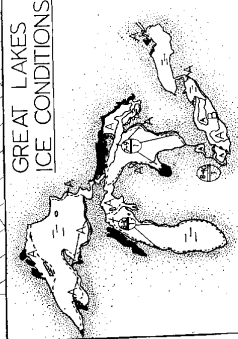
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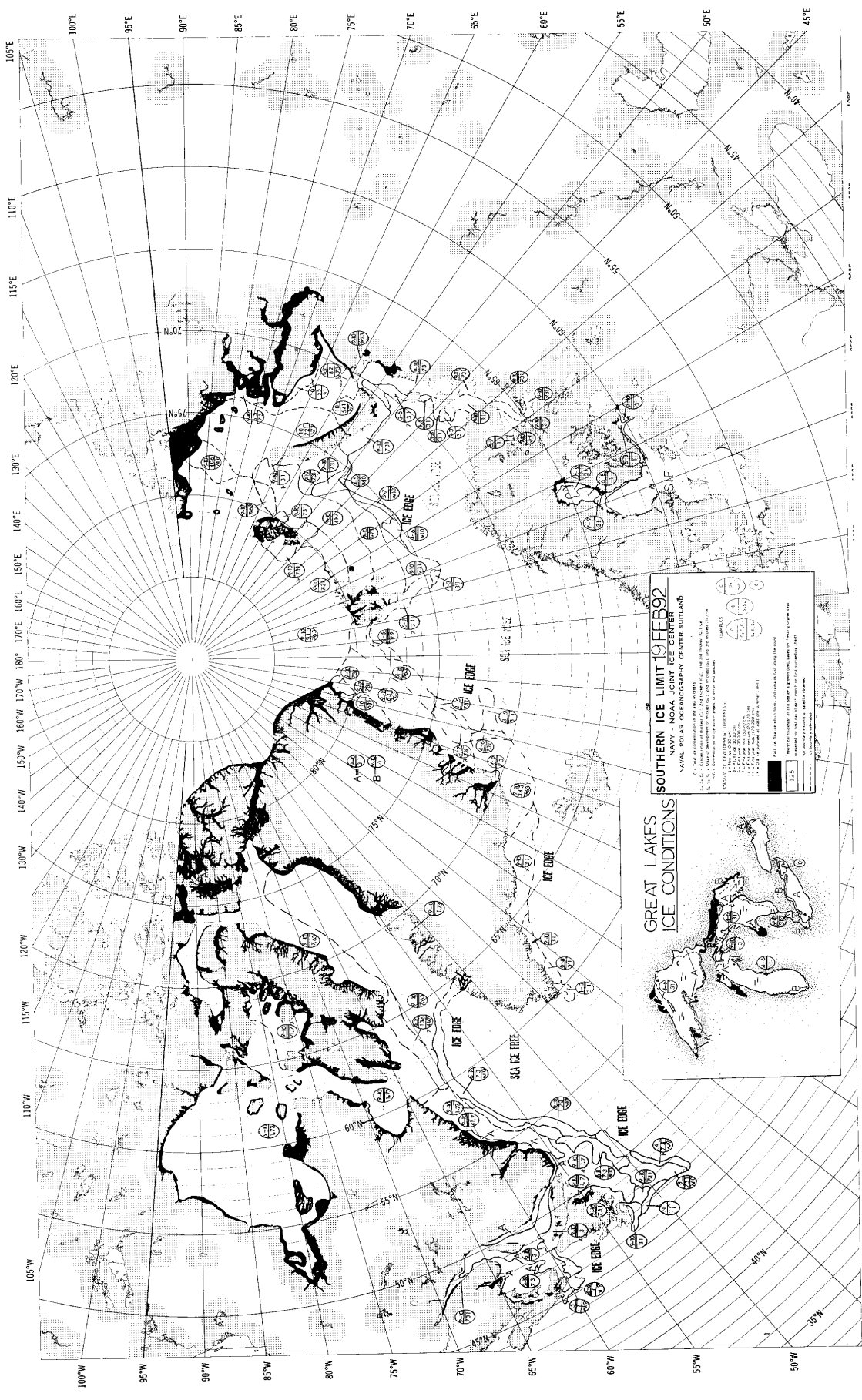




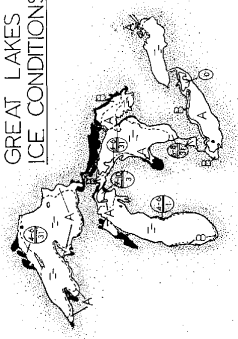
SOUTHERN ICE LIMIT 05 FEB 92
NAVAL POLAR OCEANOGRAPHY CENTER BUTLAND

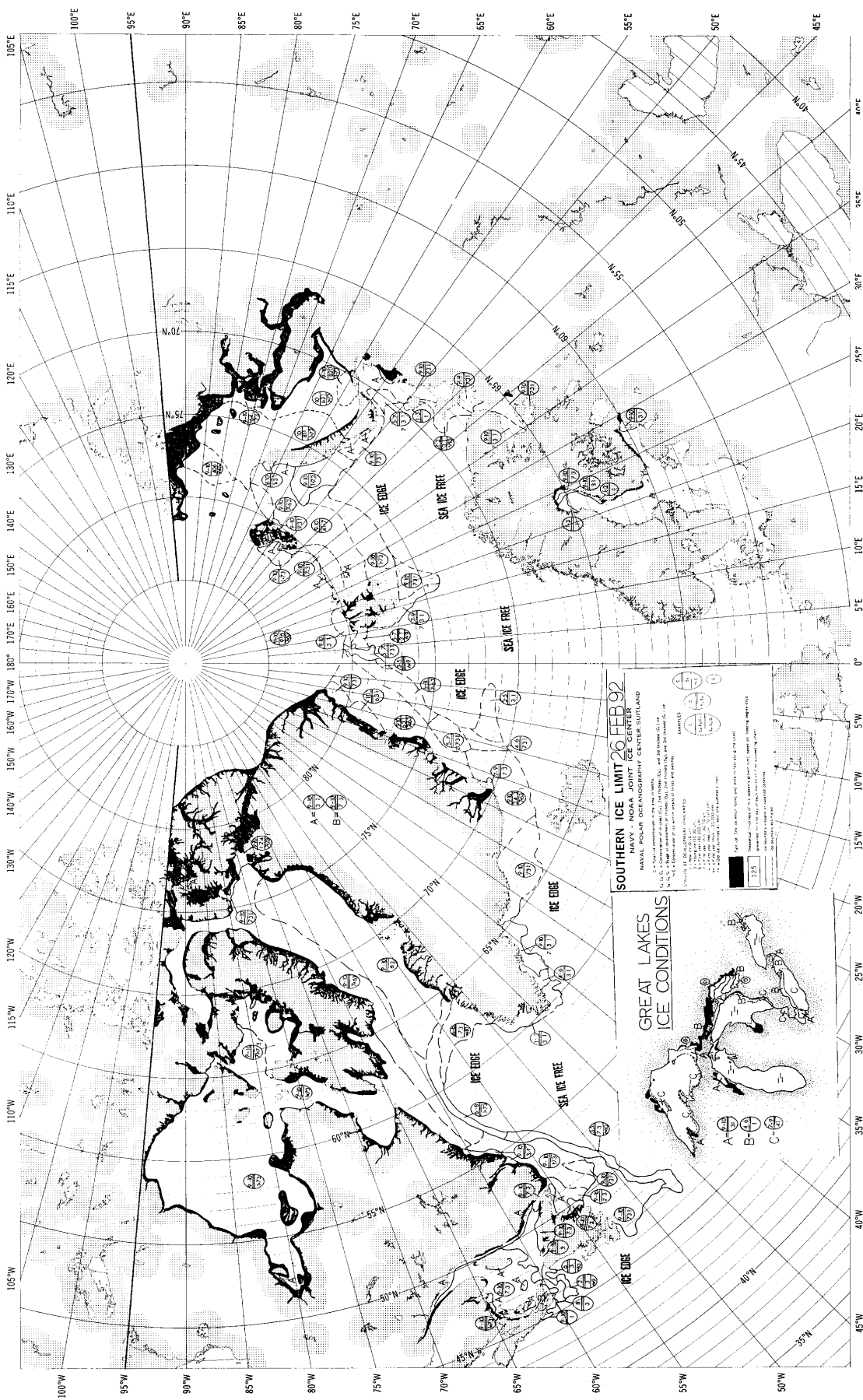
1. This map is a representation of the ice conditions in the Southern Ocean as of 05 FEB 92. It is based on data from the Naval Polar Oceanography Center and other sources. The map is not a guarantee of accuracy and is for informational purposes only. The map is not to be used for navigation or other purposes without the approval of the Naval Polar Oceanography Center. The map is the property of the Naval Polar Oceanography Center and is not to be reproduced or distributed without the approval of the Naval Polar Oceanography Center.



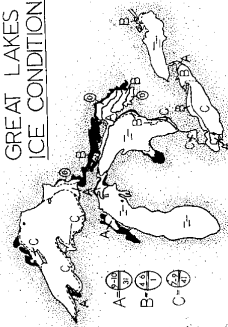


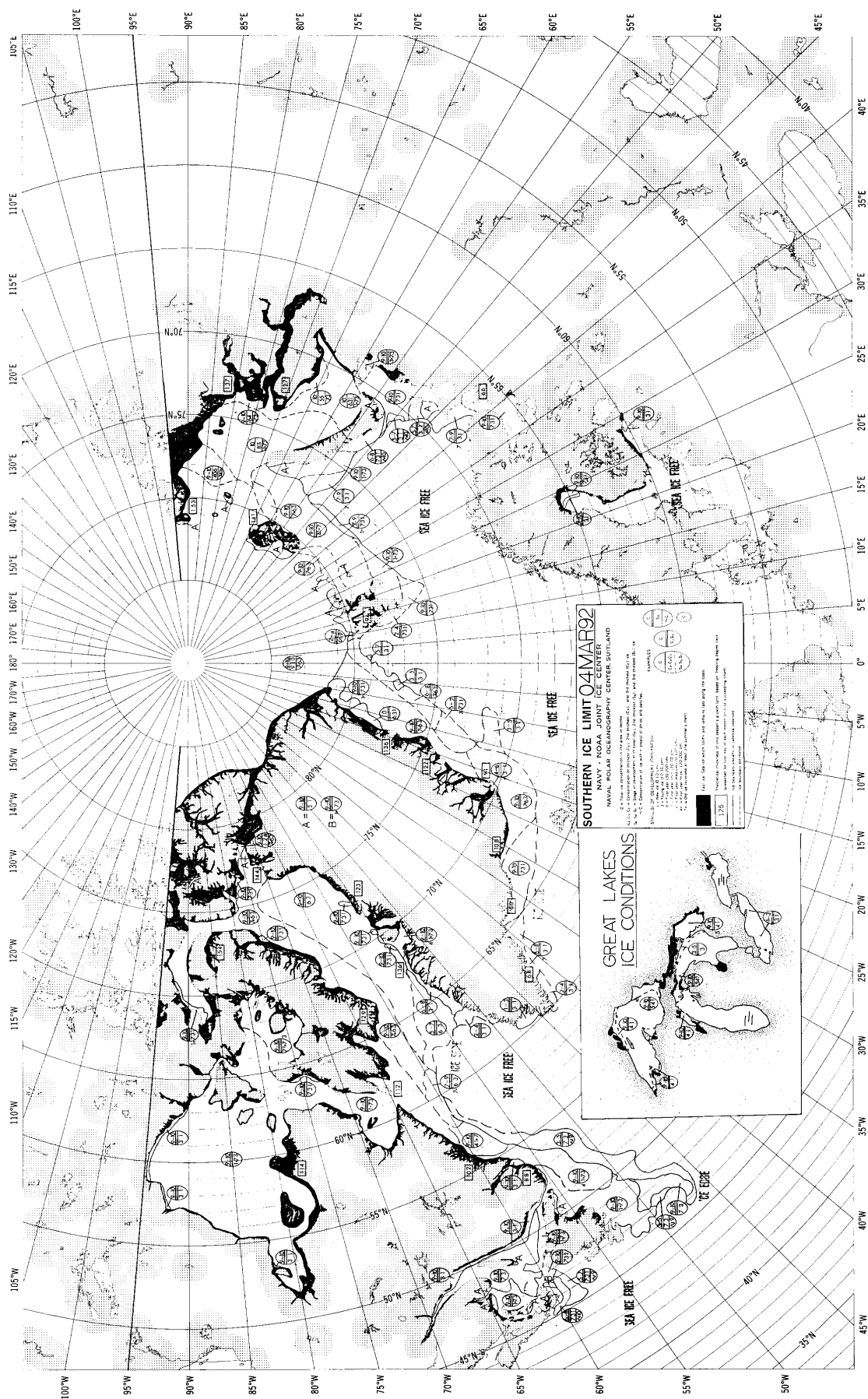
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ICE CONDITIONS**

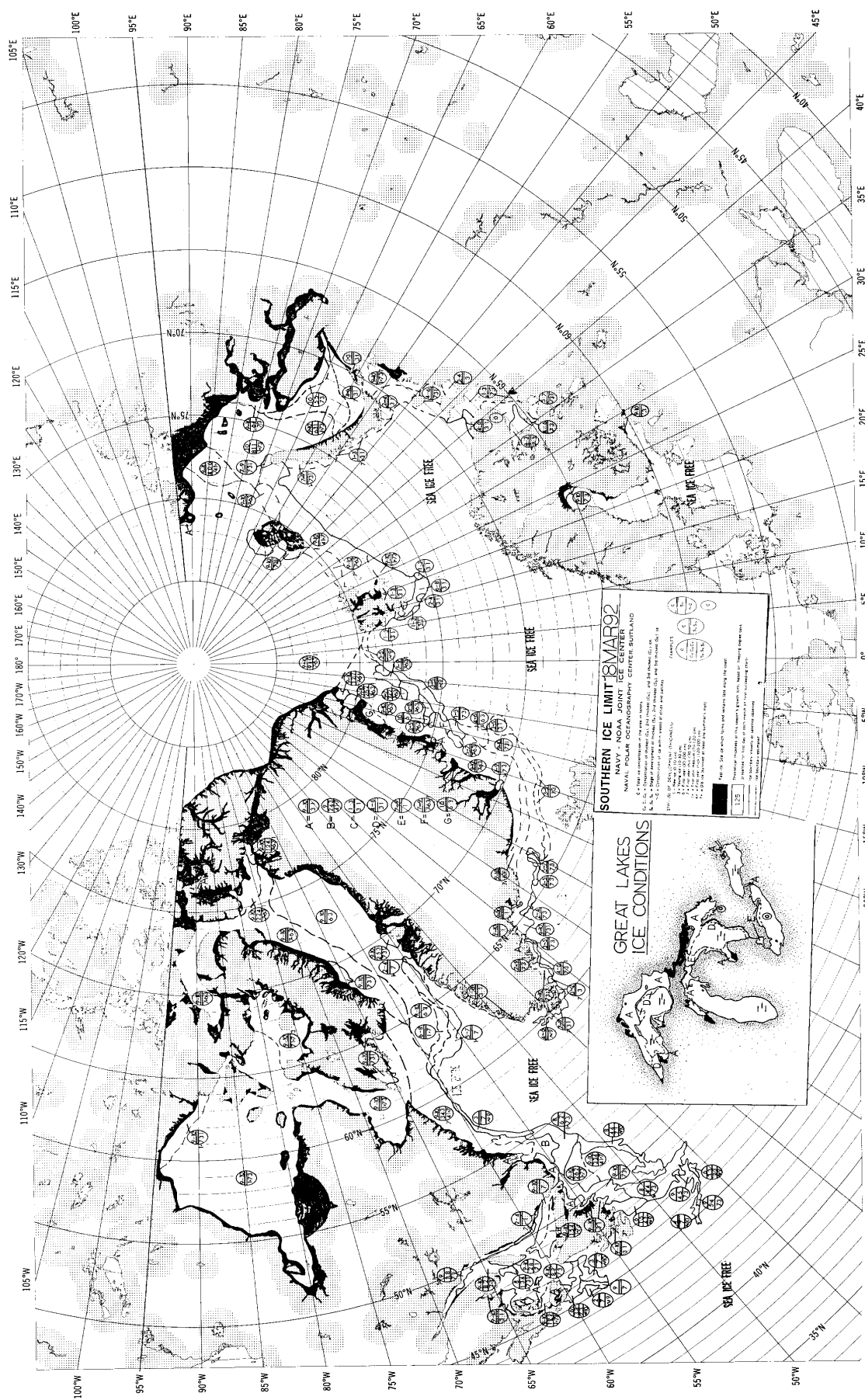


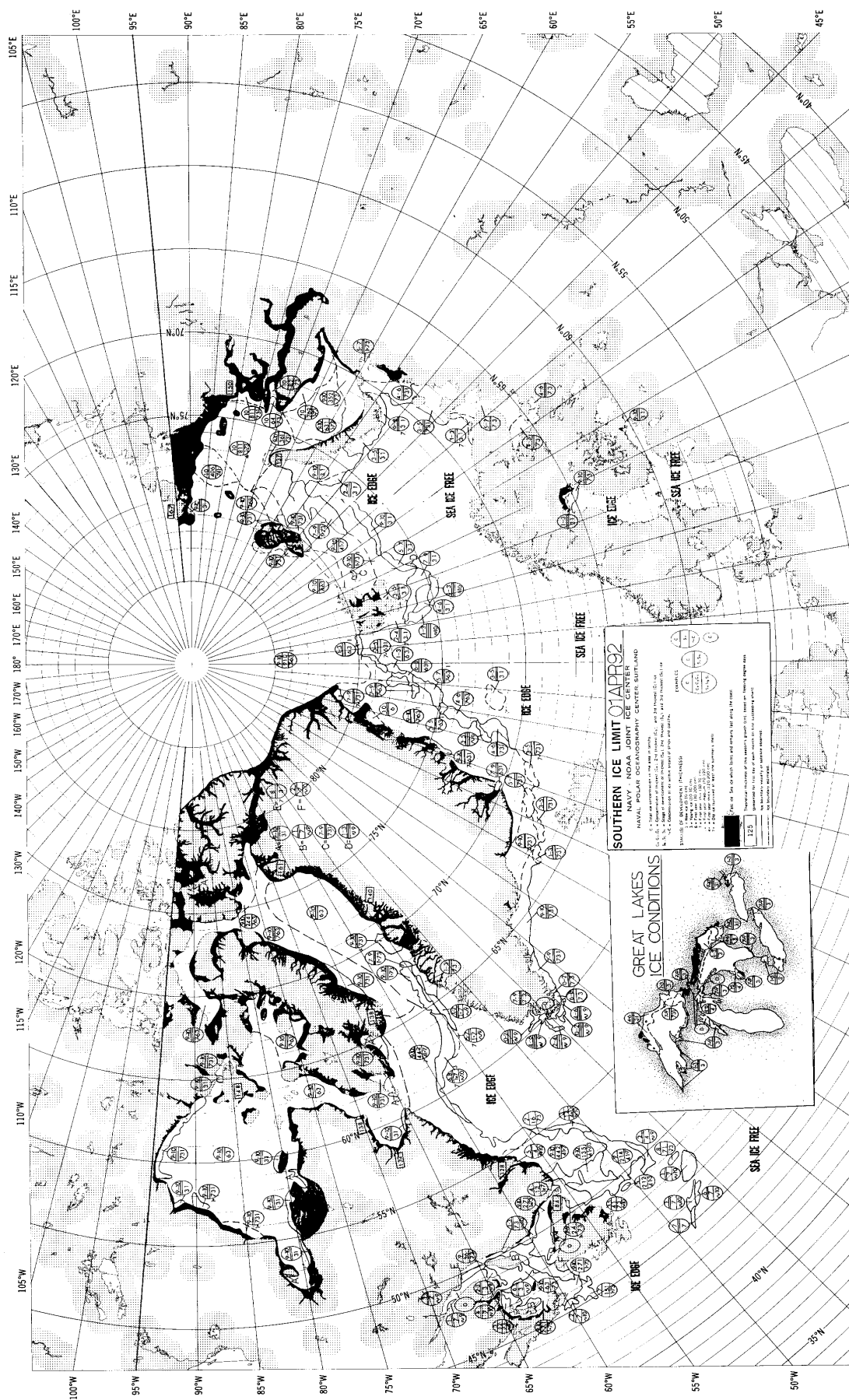


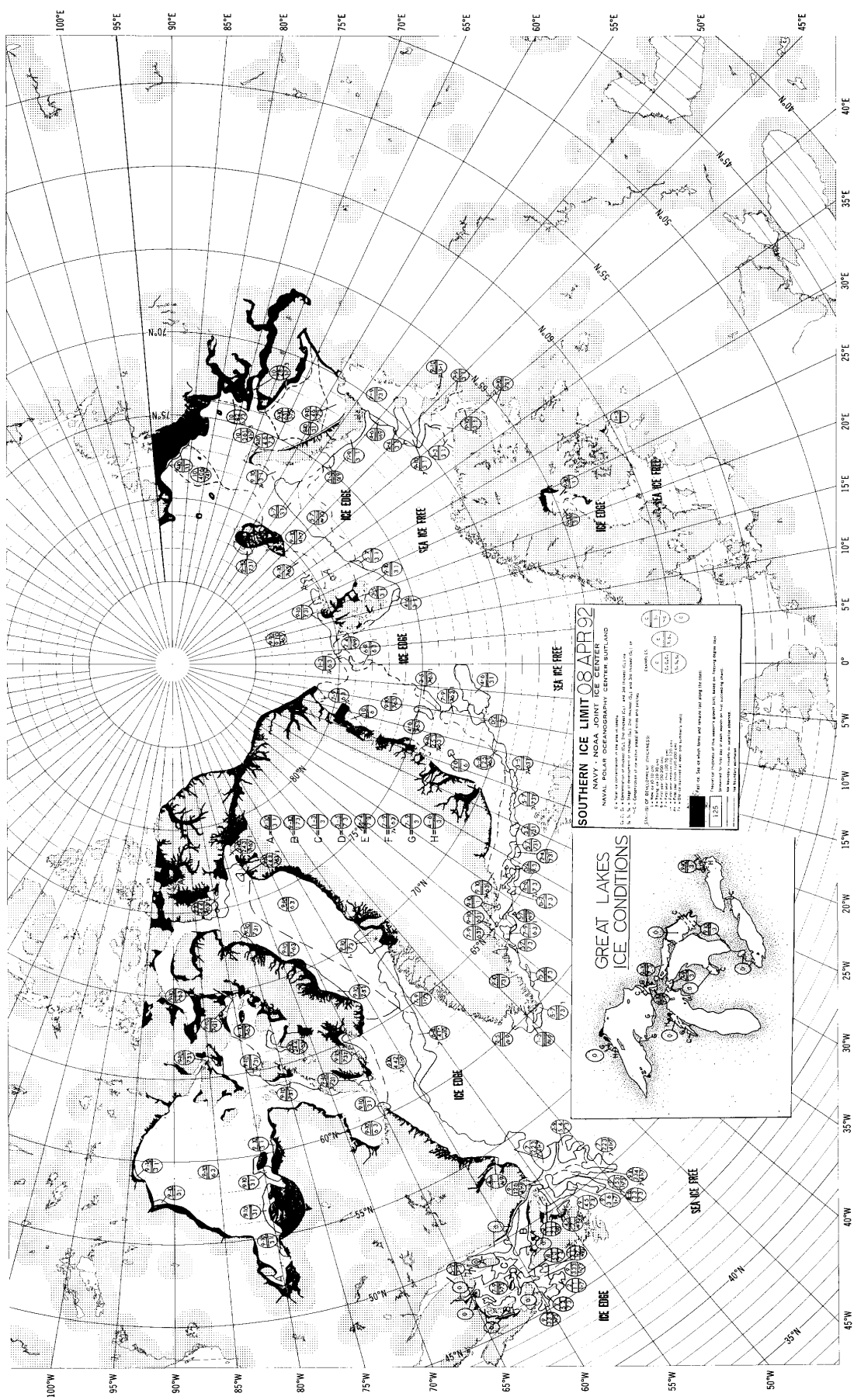
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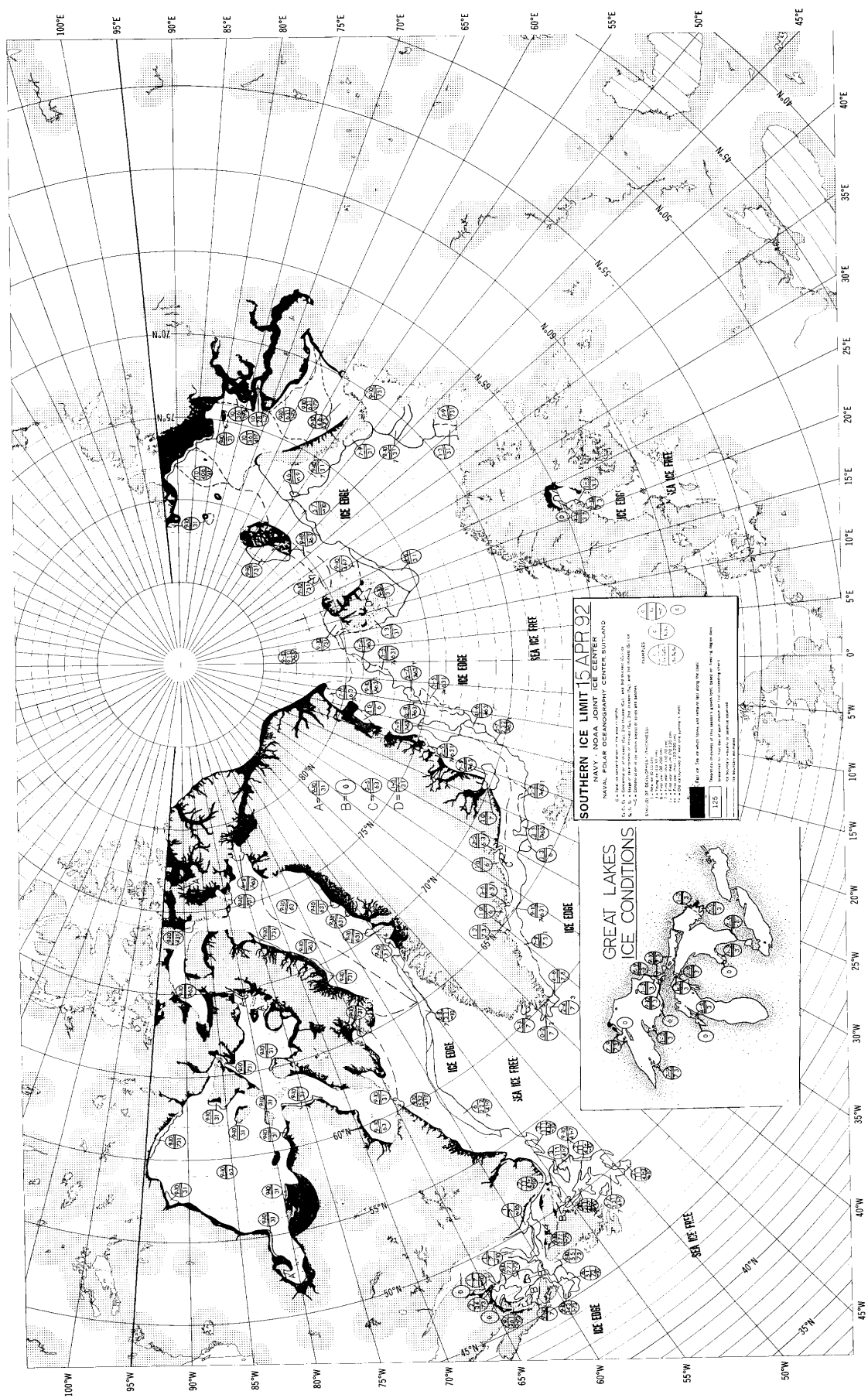


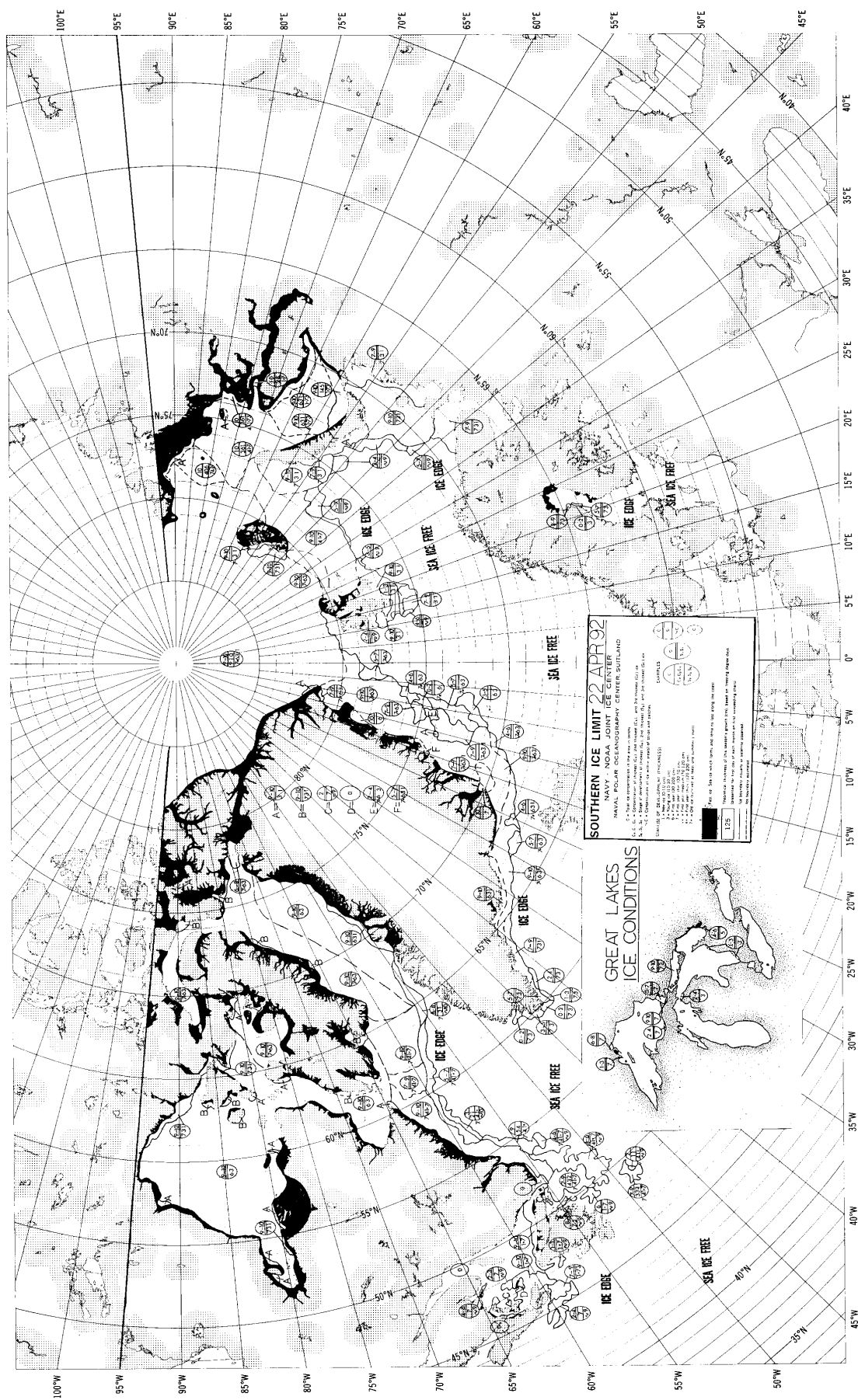


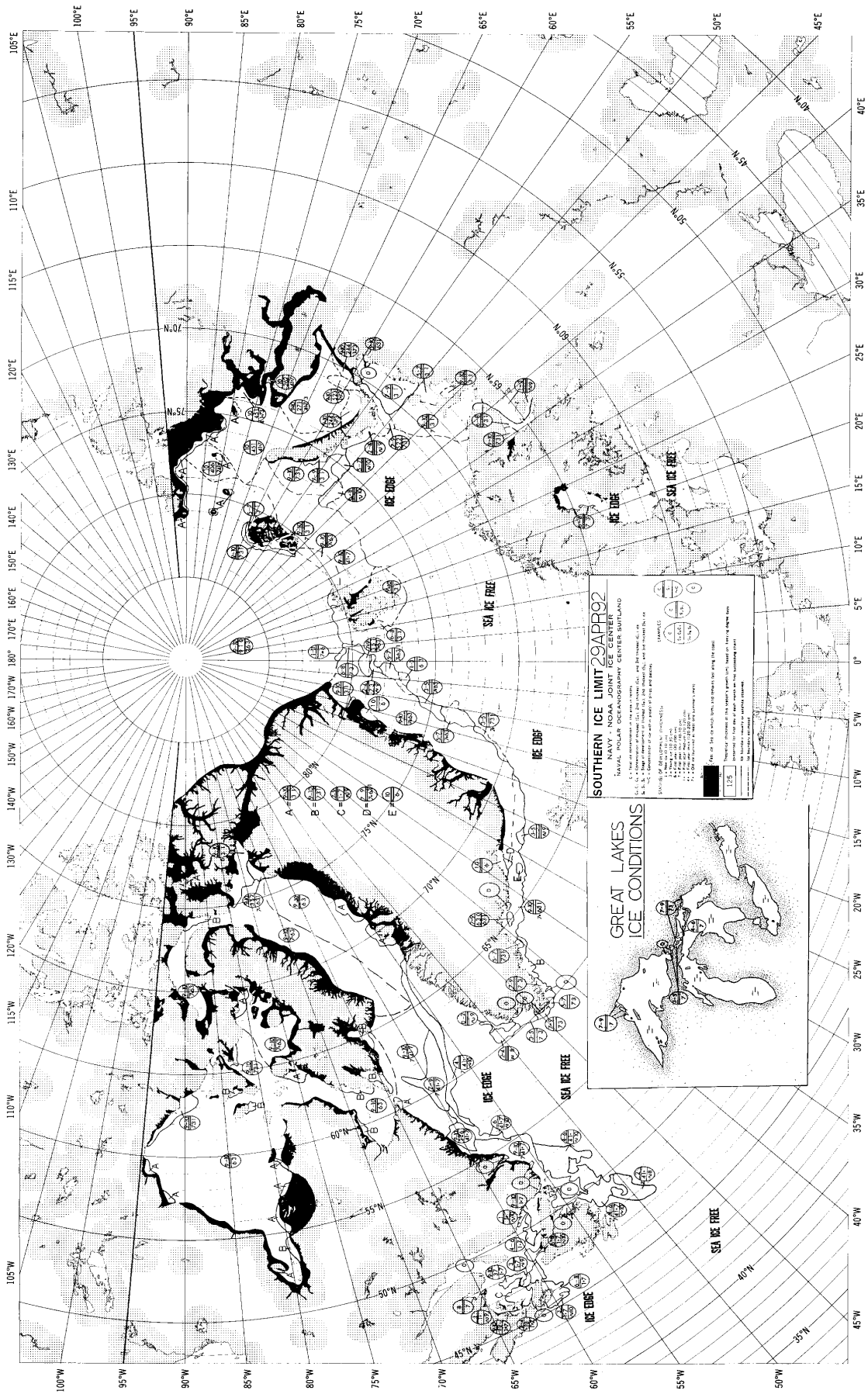










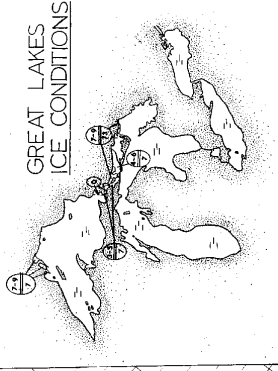


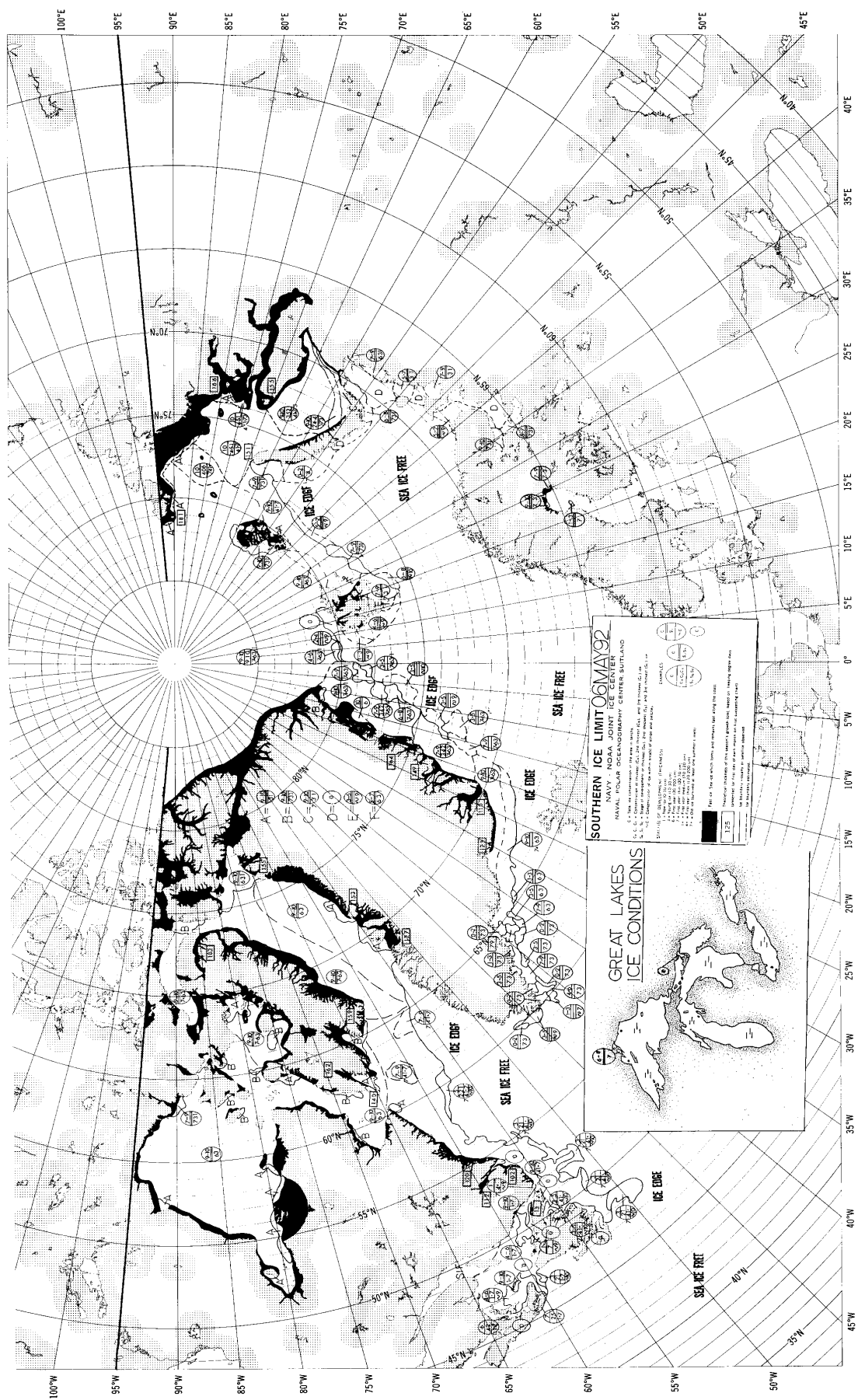
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NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUTLAND

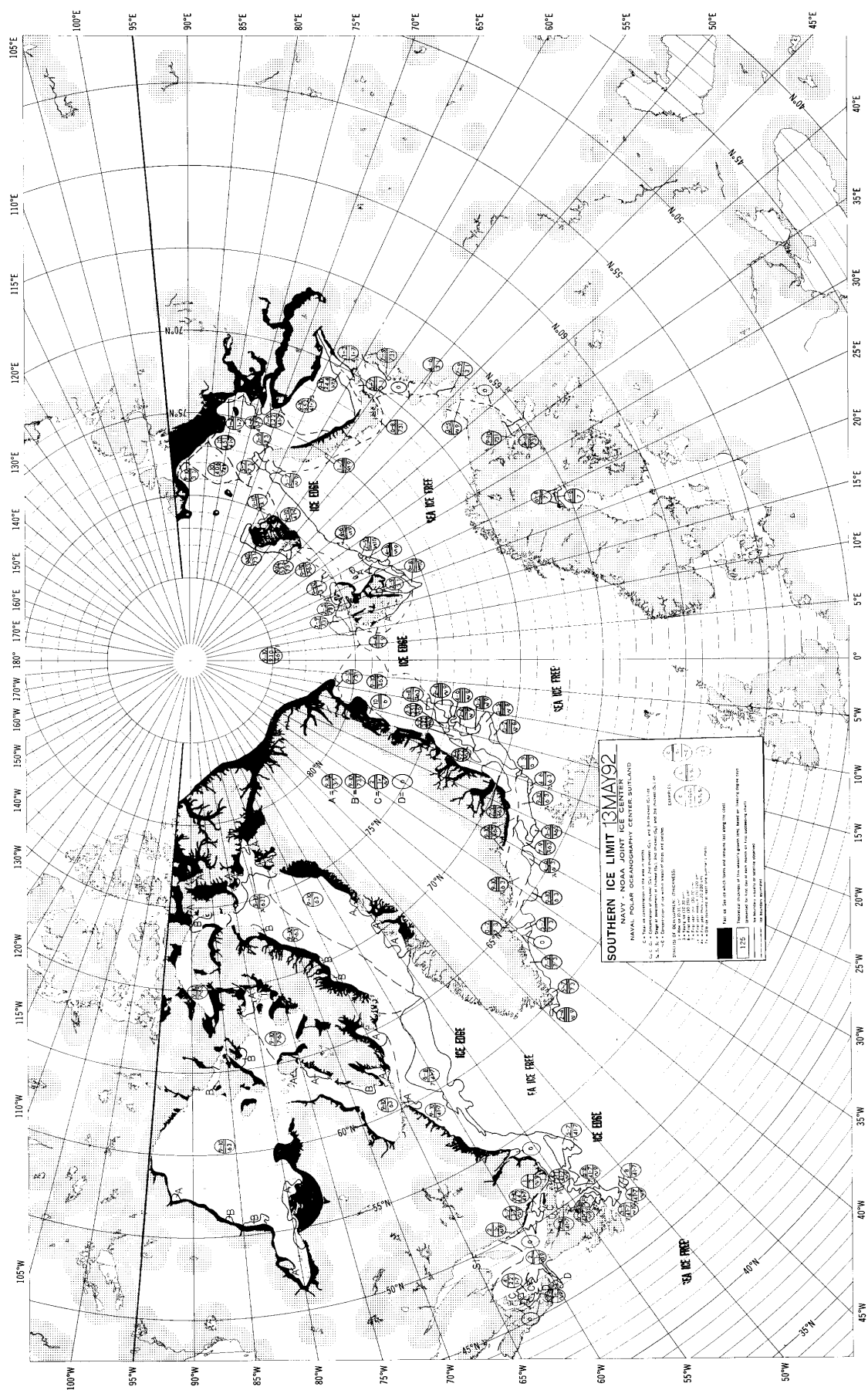
1. These ice limits are based on the latest available data and are subject to change as more information becomes available.
2. The ice limit is defined as the southernmost edge of the ice field.
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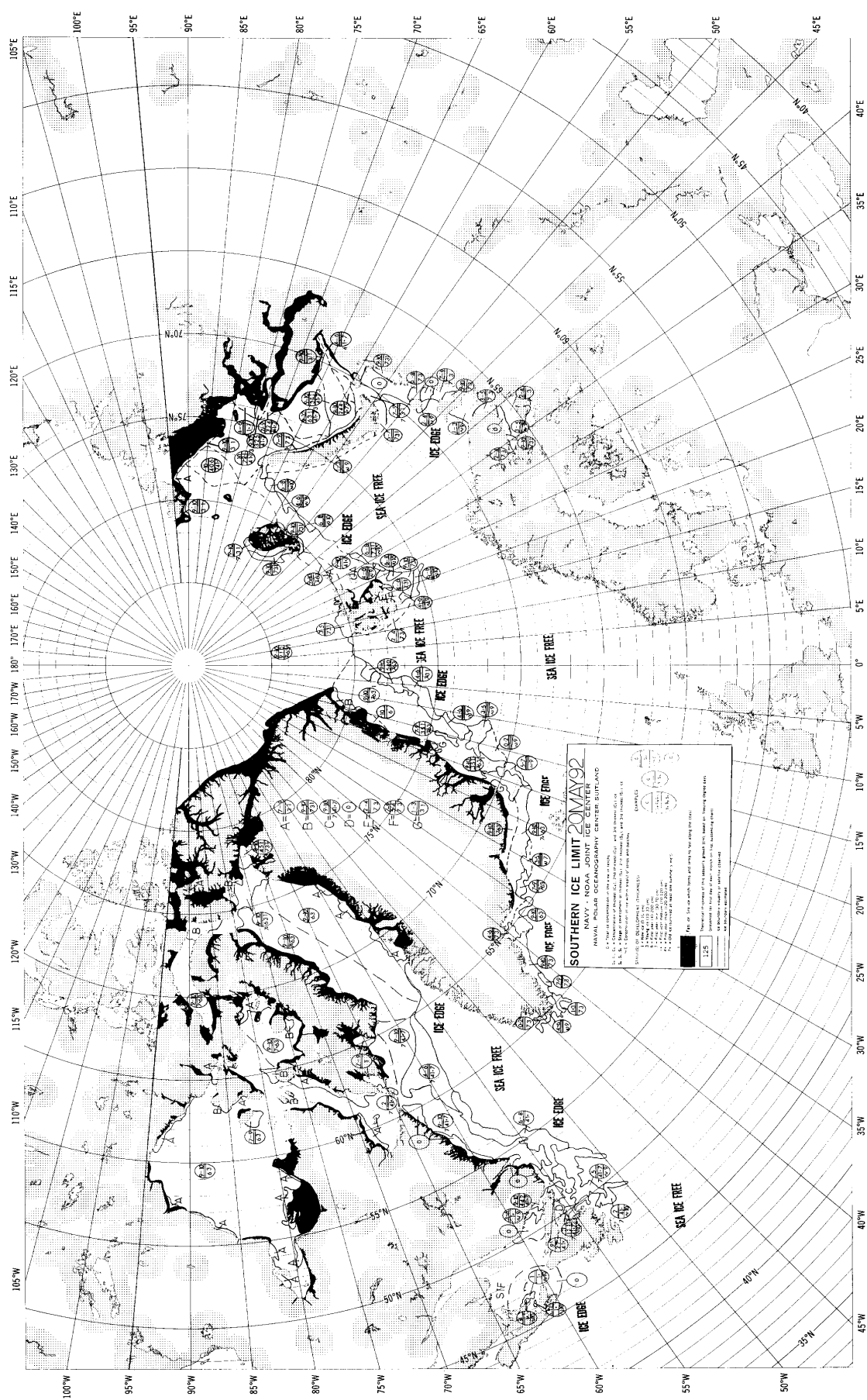
EXAMPLES

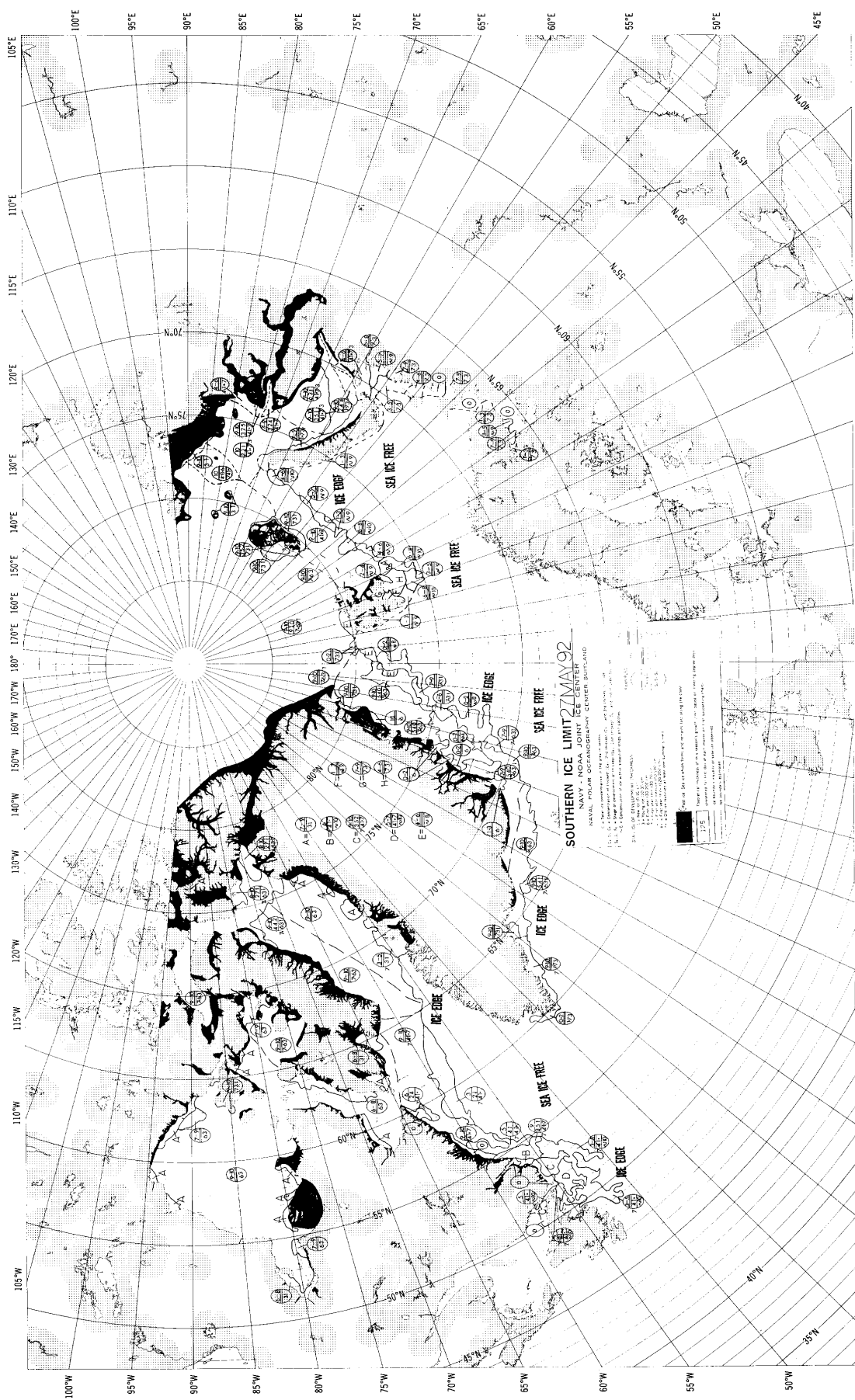
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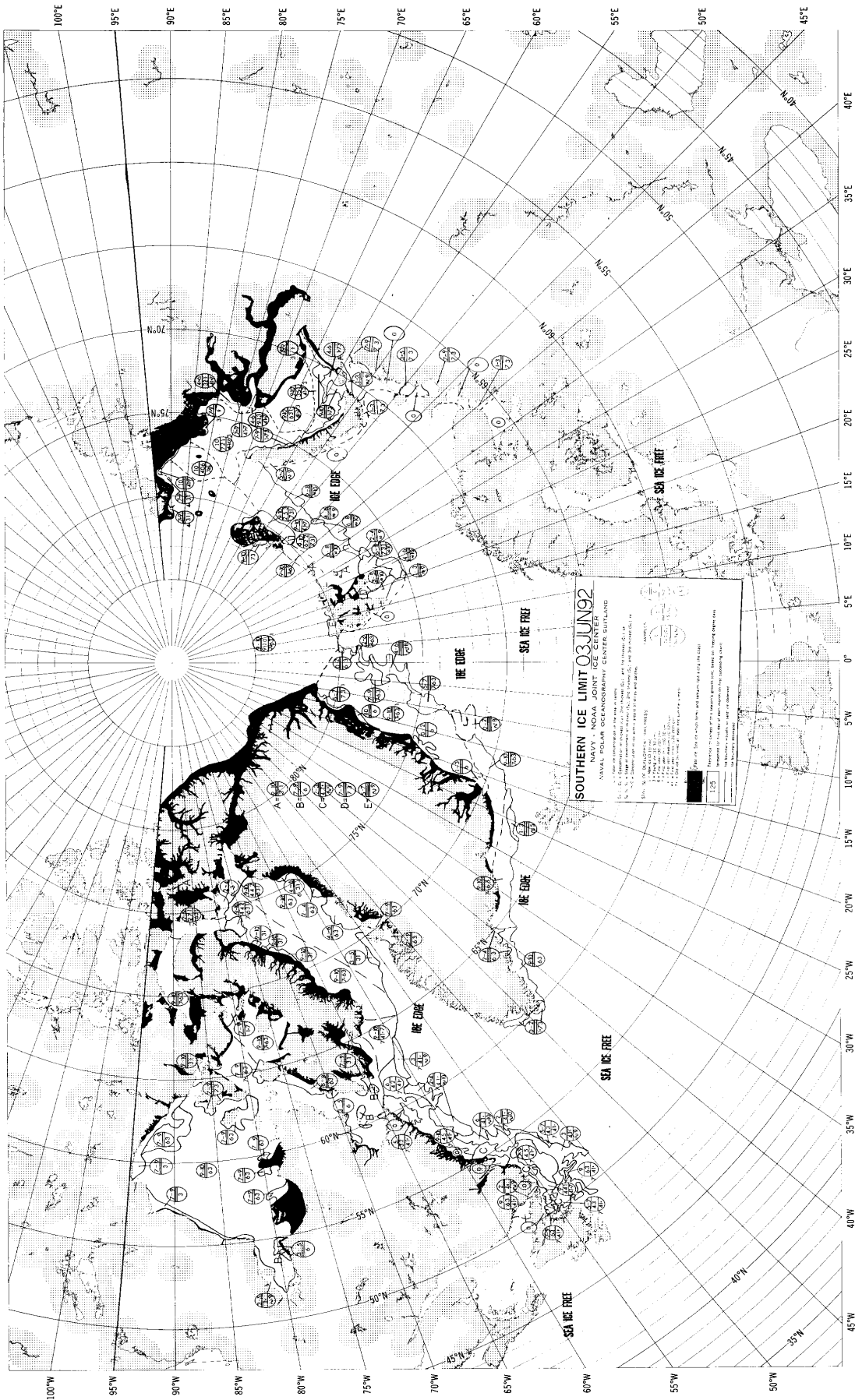


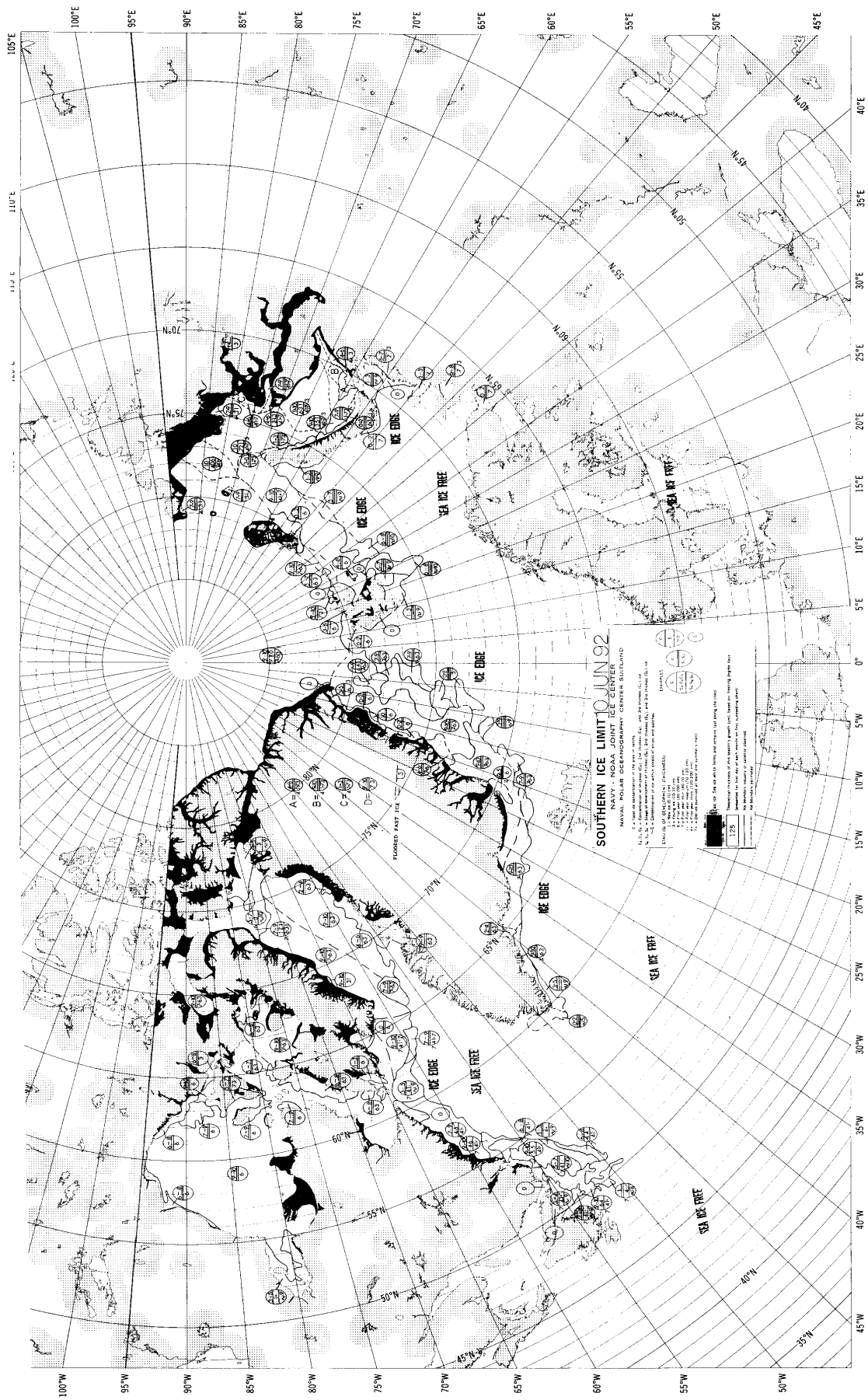


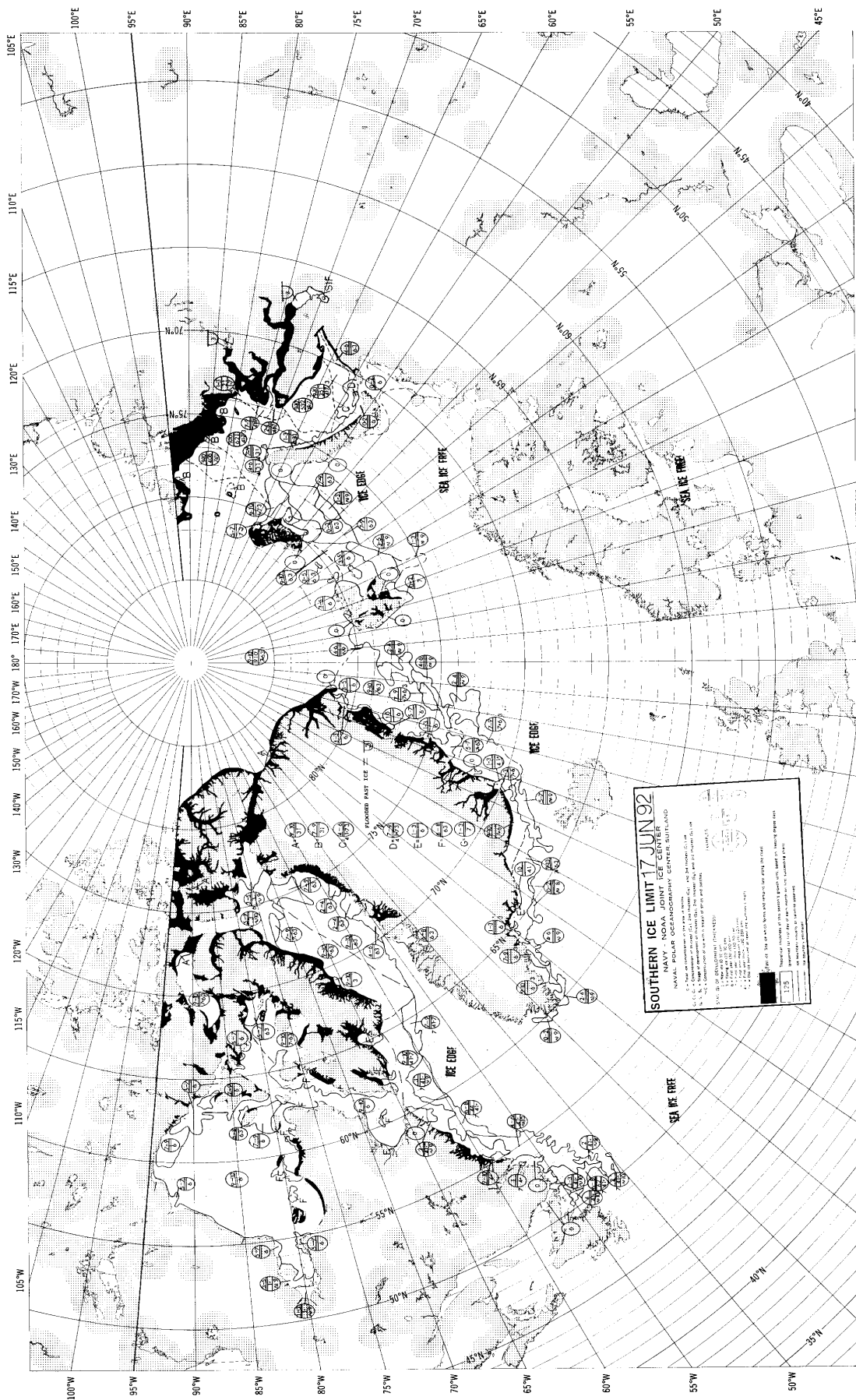


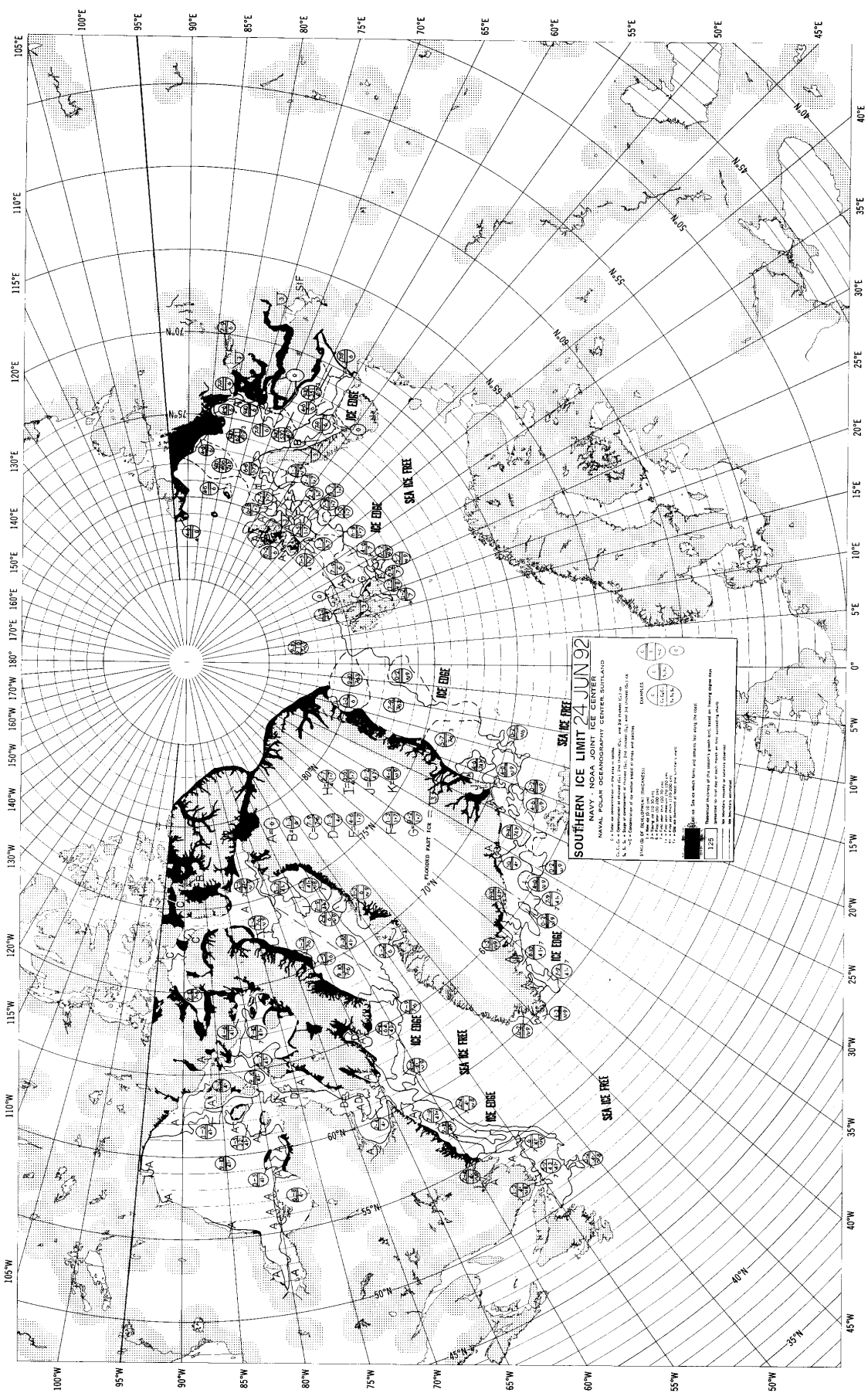


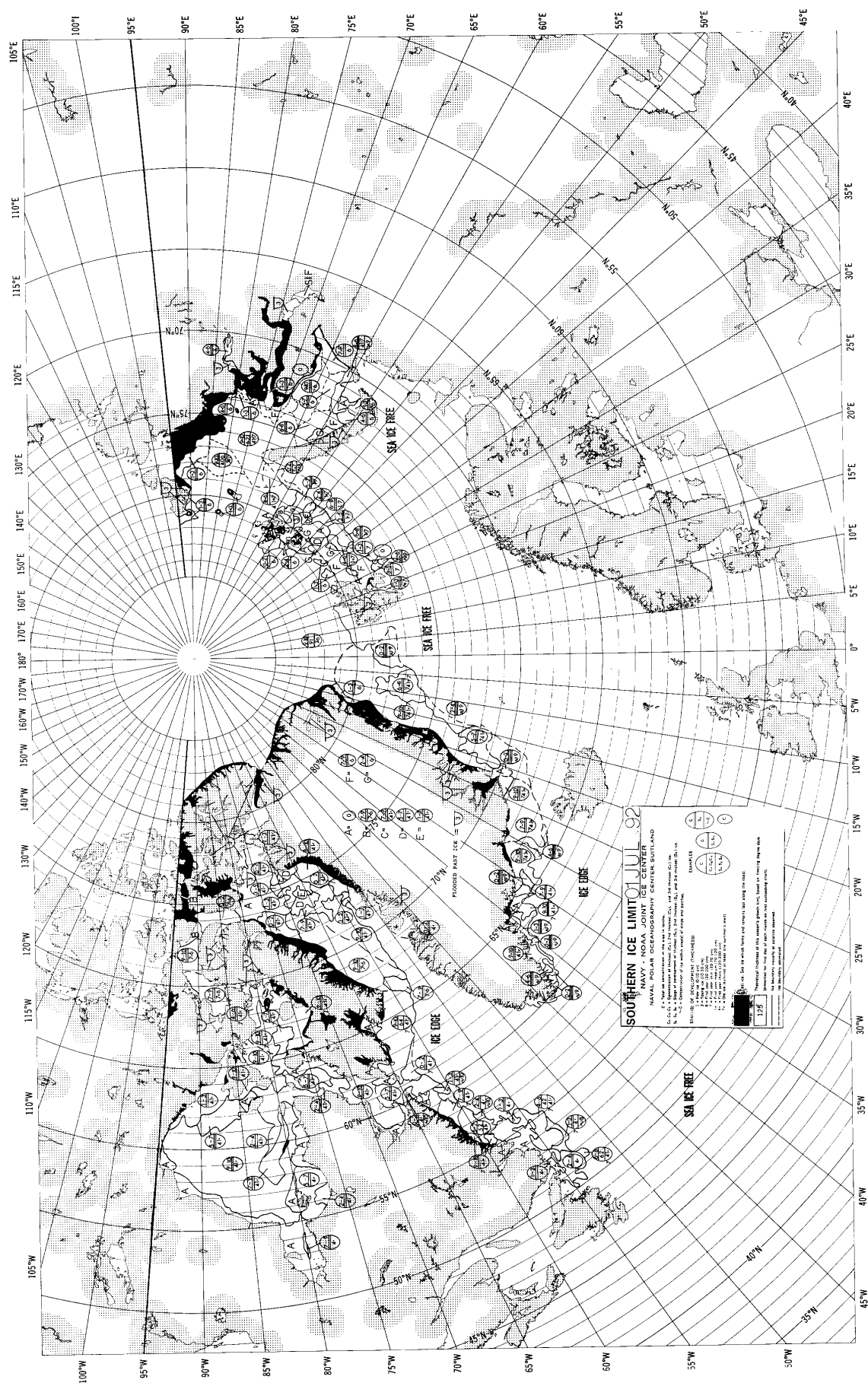


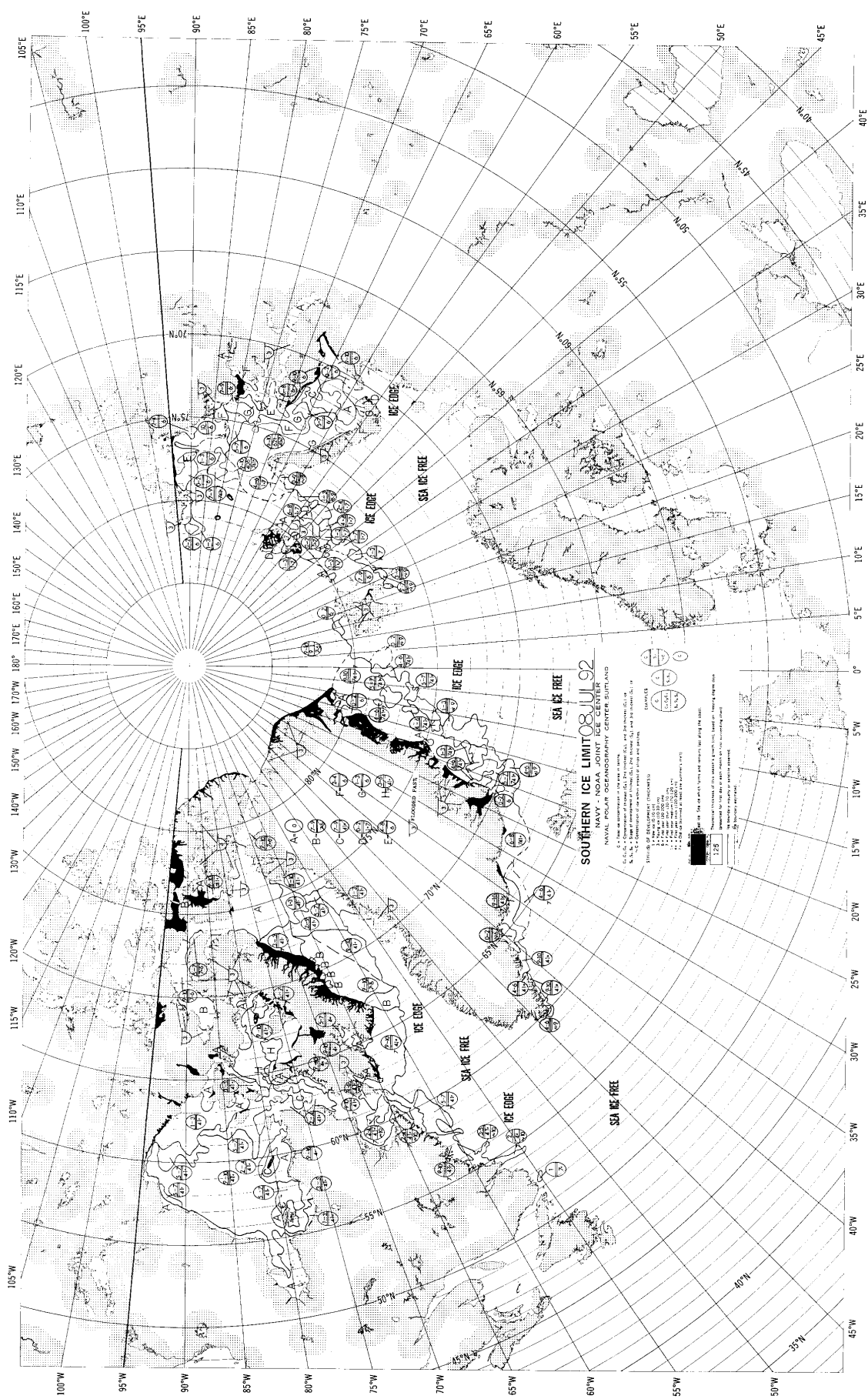


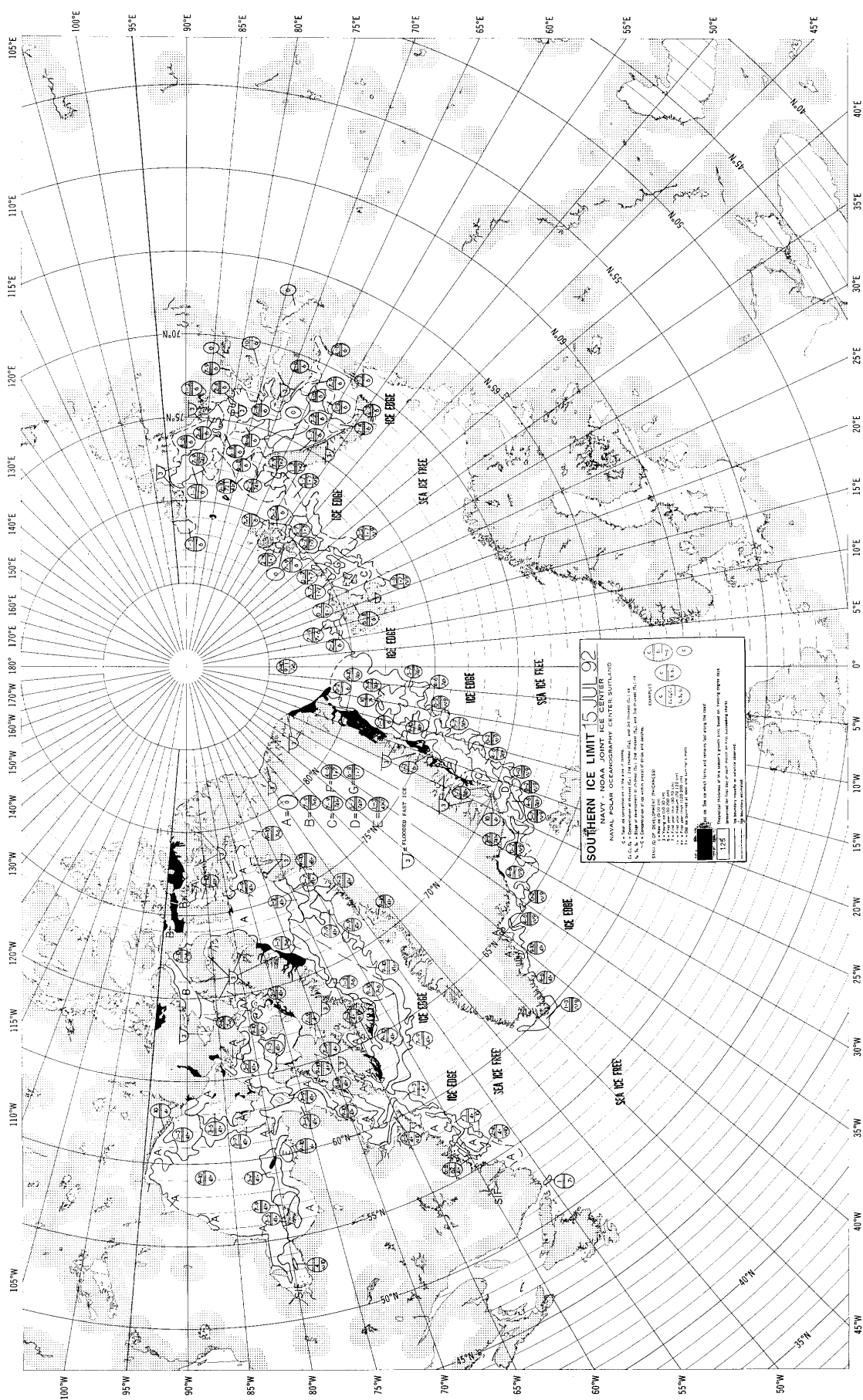


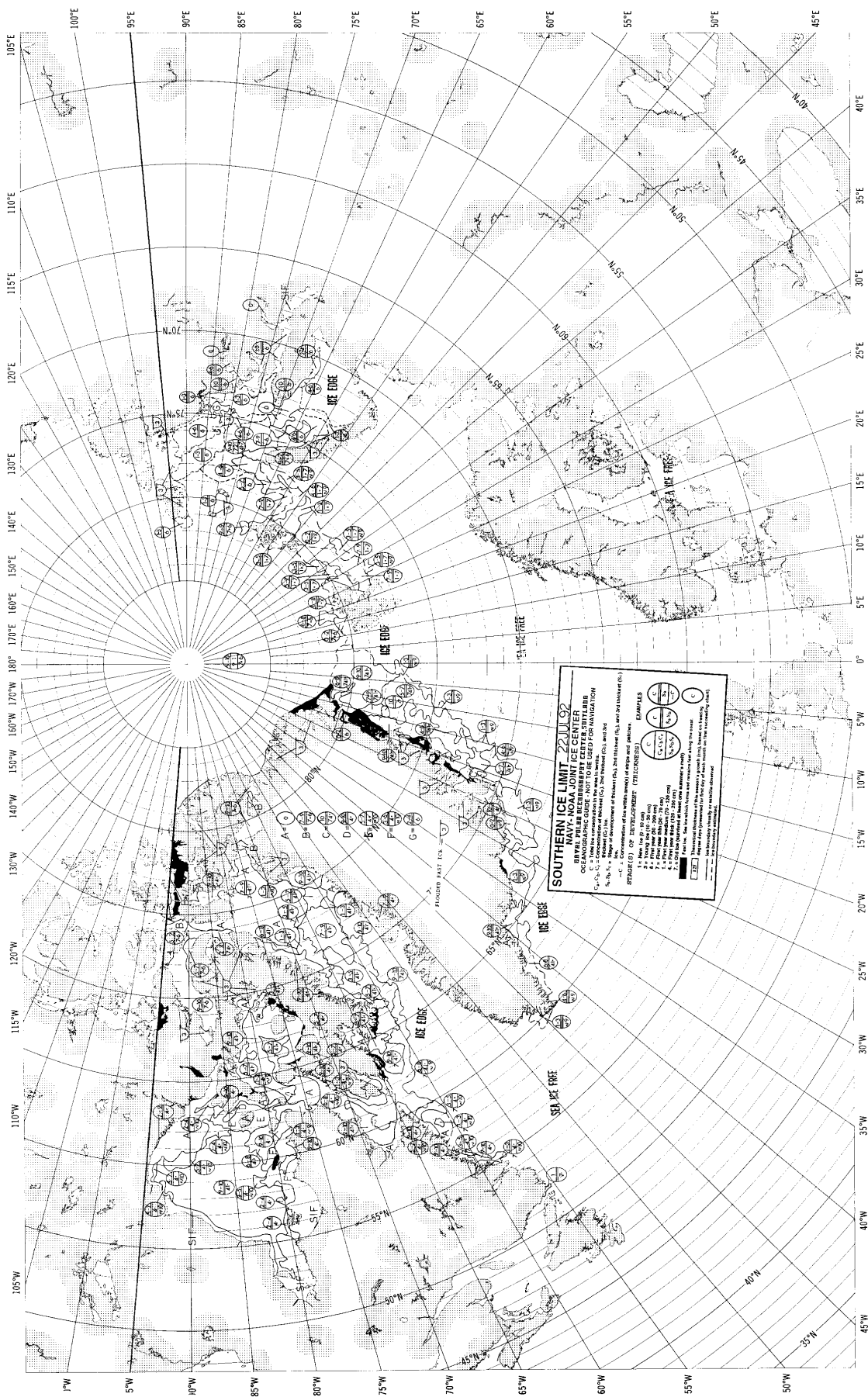












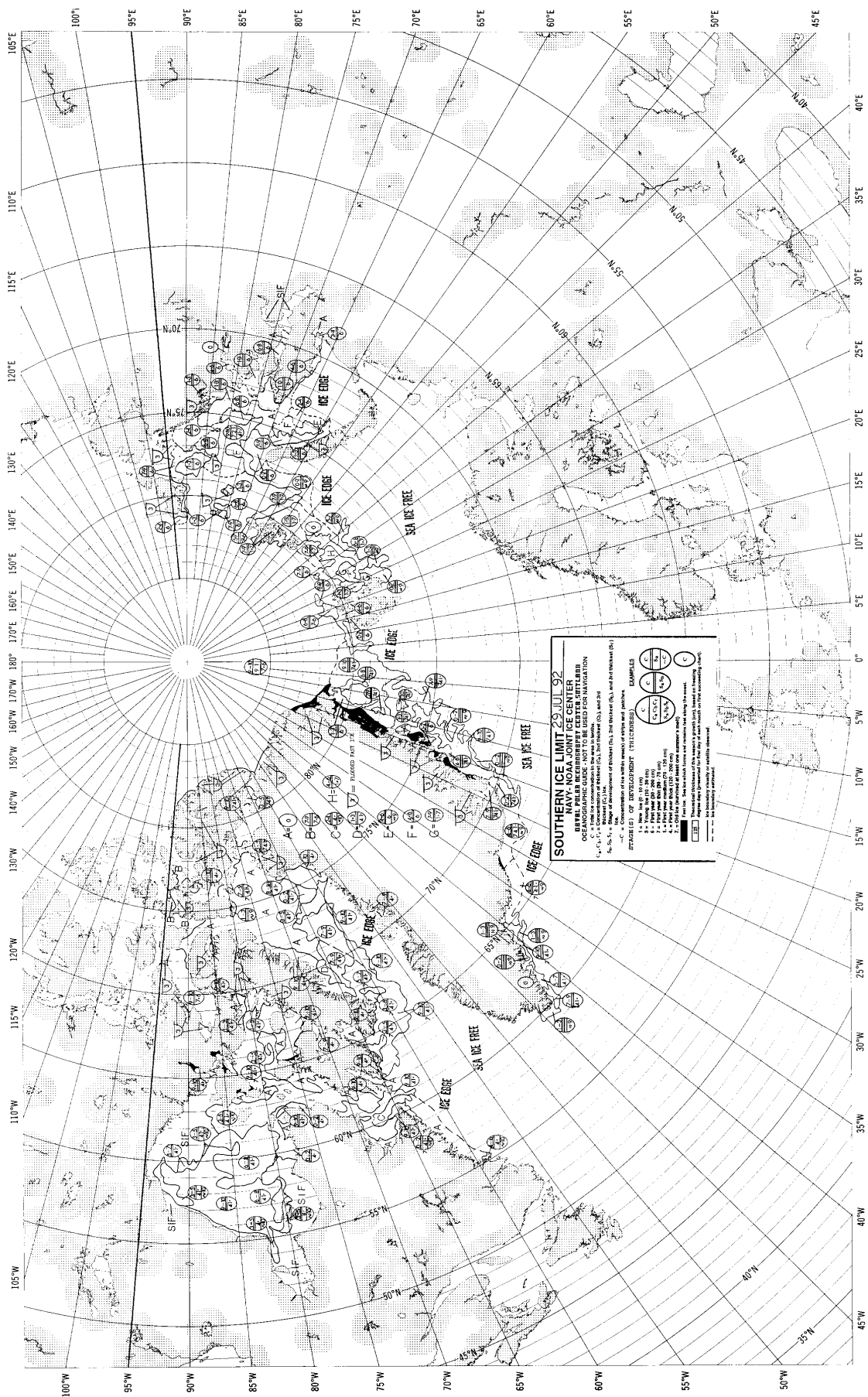
SOUTHERN ICE LIMIT 22 JUL 92
NAVY-NOAA JOINT ICE CENTER
OCEANOGRAPHIC GUIDE
ICE LIMITS
ICE TYPES
ICE DENSITIES

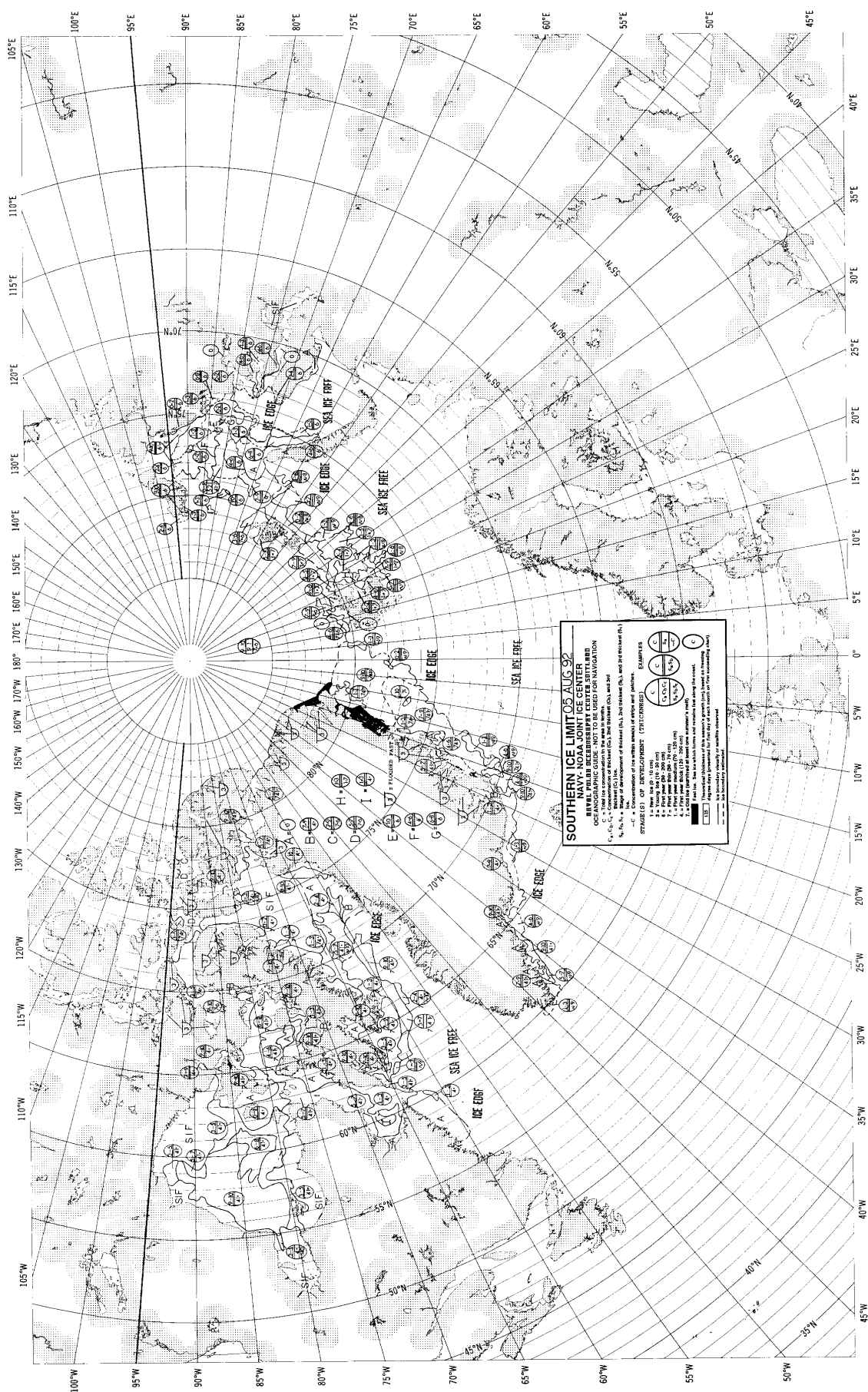
ICE LIMITS
 A. Ice Limit (IL) - The outermost limit of ice in the area.
 B. Ice Edge (IE) - The innermost limit of ice in the area.
 C. Ice Density (ID) - The density of the ice in the area.

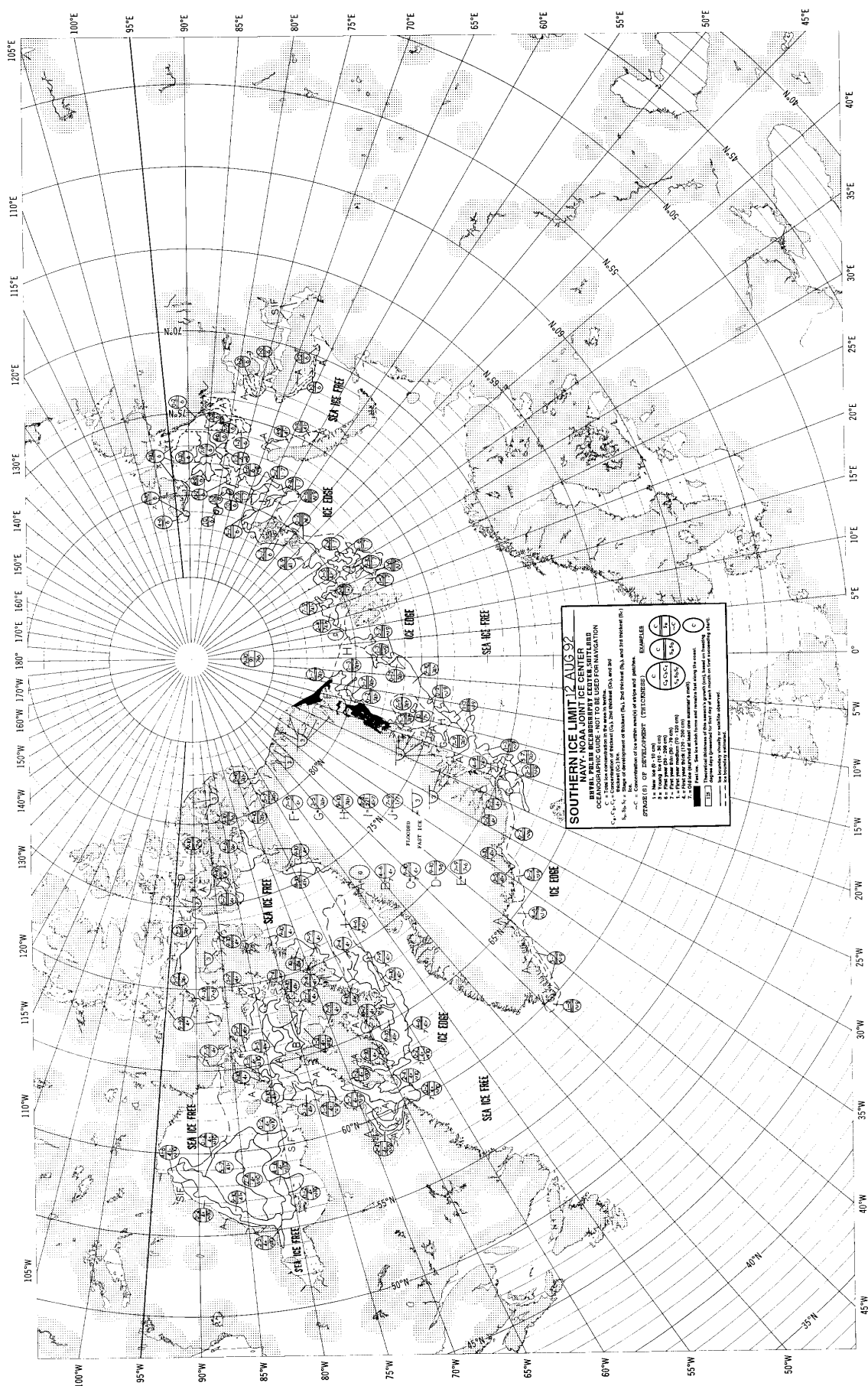
ICE TYPES
 1. Ice Type (IT) - The type of ice in the area.
 2. Ice Density (ID) - The density of the ice in the area.

ICE DENSITIES
 1. Ice Density (ID) - The density of the ice in the area.
 2. Ice Density (ID) - The density of the ice in the area.

EXAMPLES
 A. Ice Limit (IL) - 100
 B. Ice Edge (IE) - 100
 C. Ice Density (ID) - 100





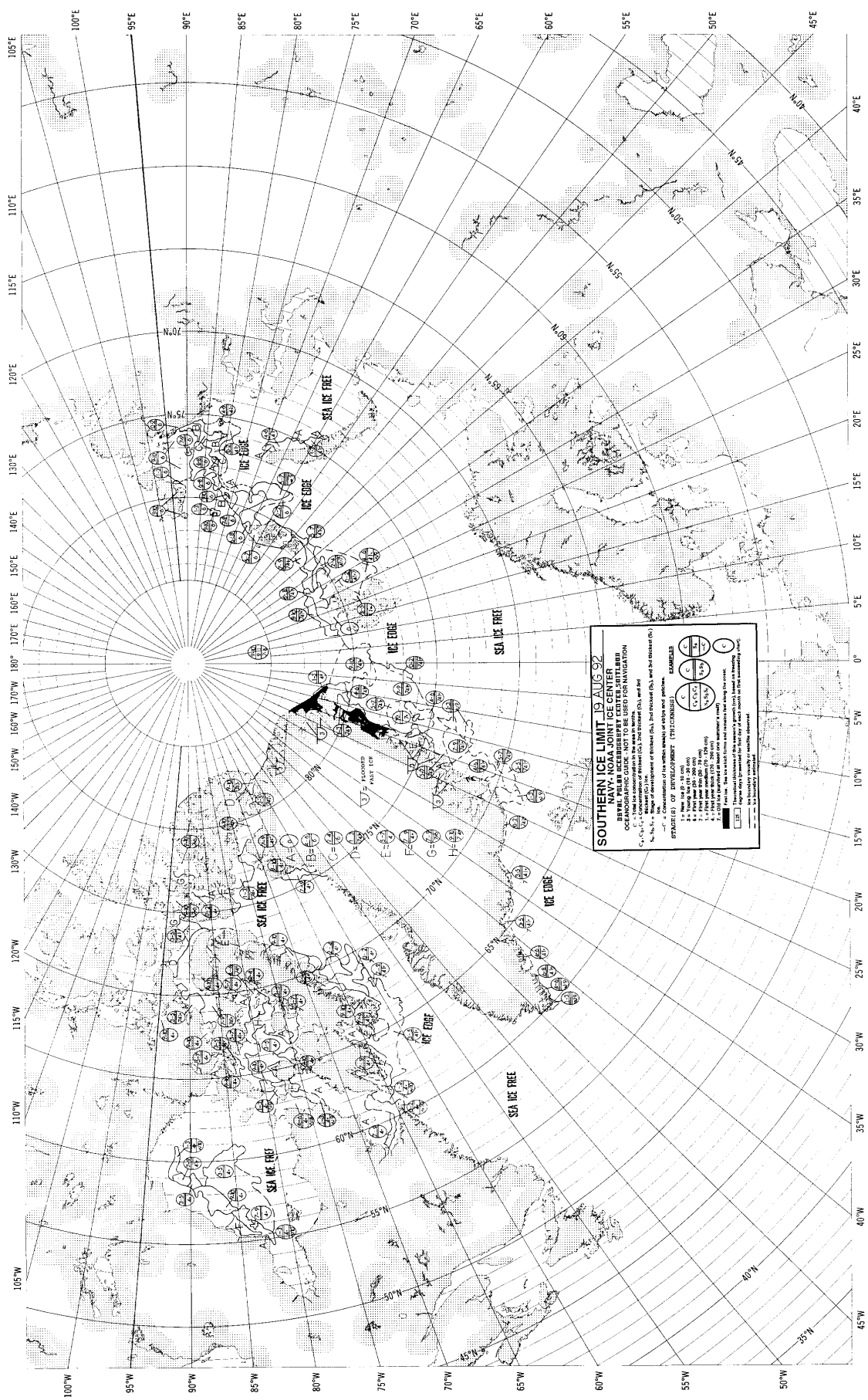


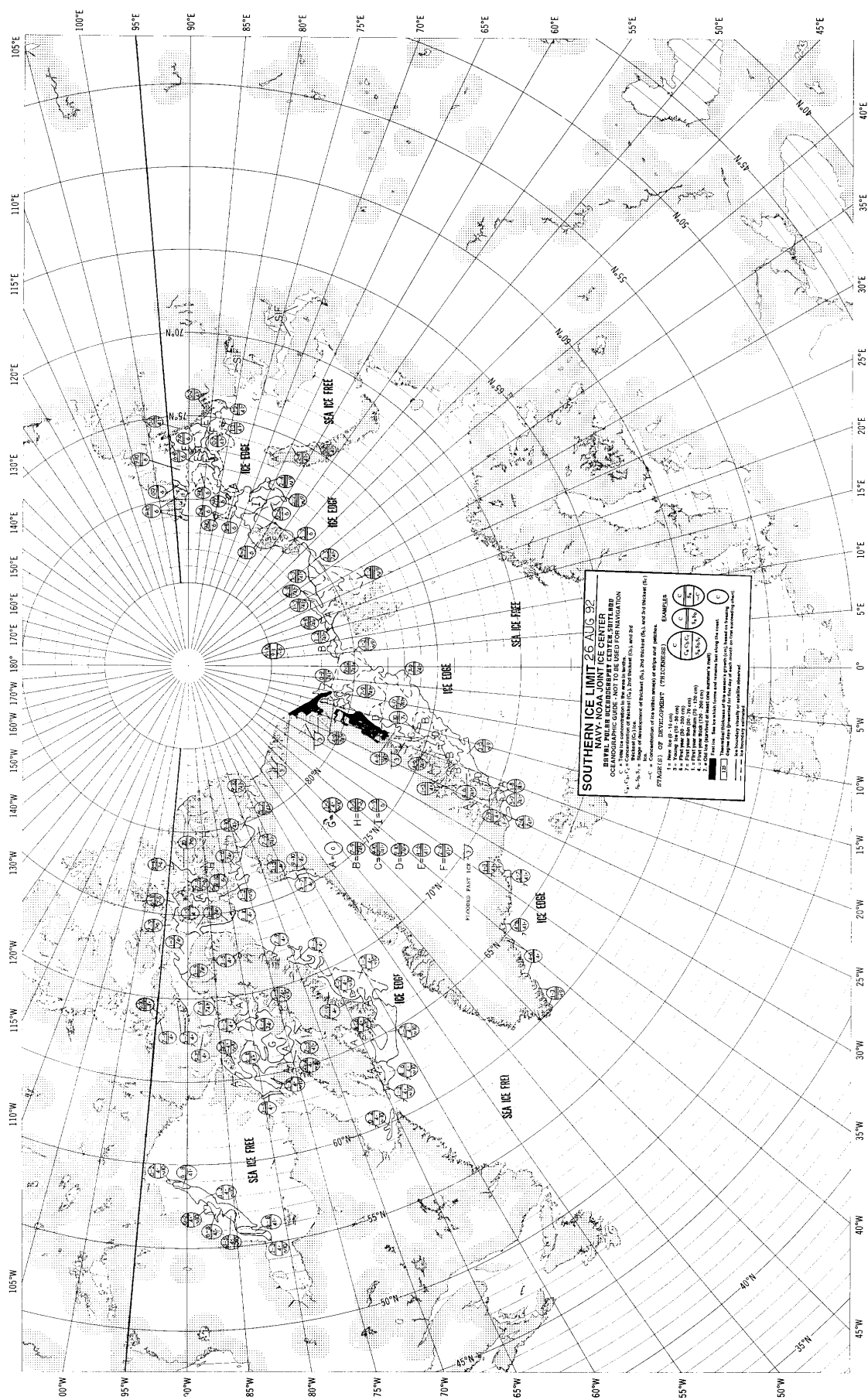
SOUTHERN ICE LIMIT 12 AUG 92
 NAVY, NOAA JOINT ICE CENTER
 SYMBOLS RECEIVED BY THE JOINT ICE CENTER
 OBSERVATIONS ARE TO BE USED FOR NAVIGATION

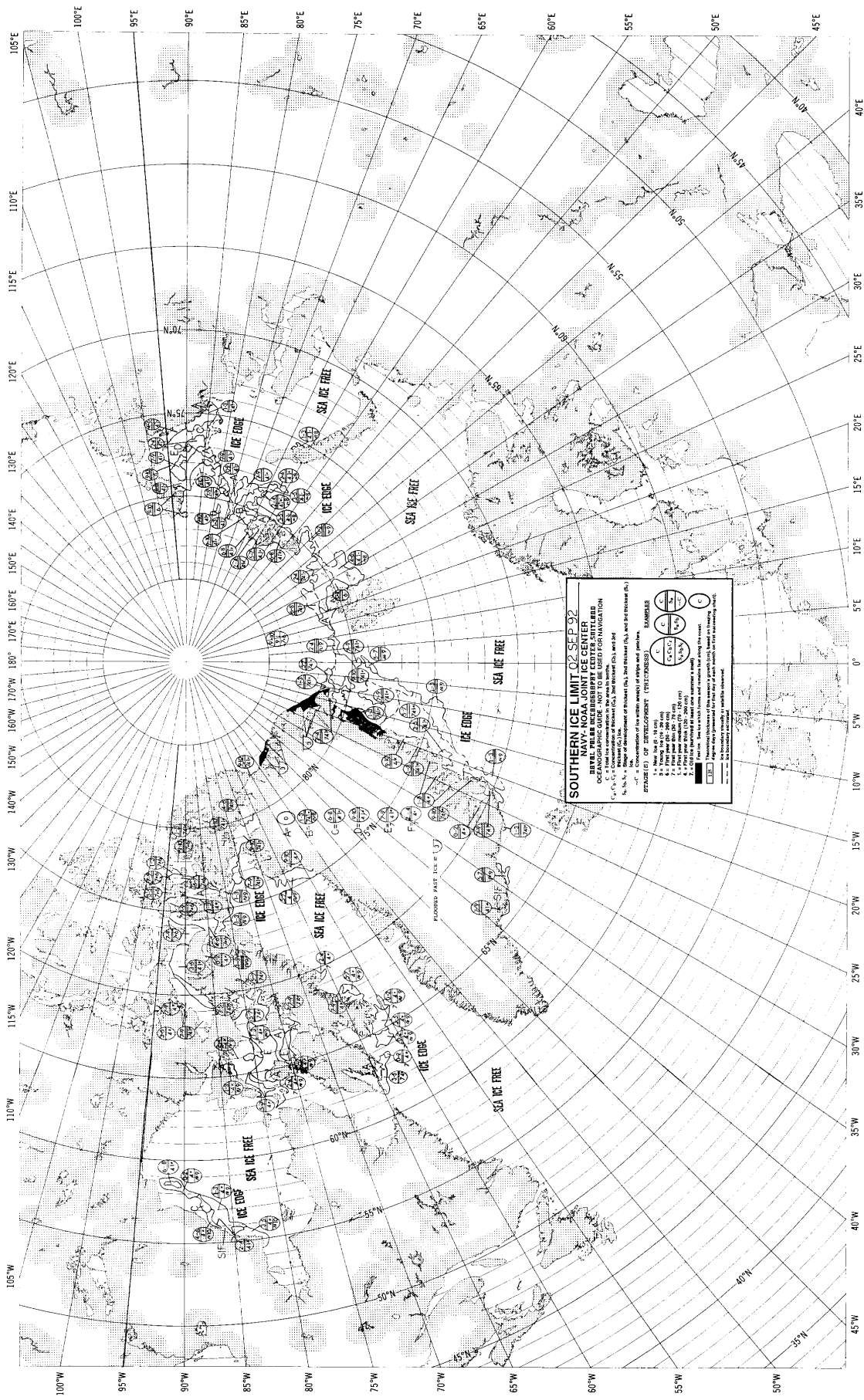
SYMBOLS:
 A - Iceberg (see description in the area to be used)
 B - Iceberg (see description in the area to be used)
 C - Iceberg (see description in the area to be used)
 D - Iceberg (see description in the area to be used)
 E - Iceberg (see description in the area to be used)
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 Z - Iceberg (see description in the area to be used)

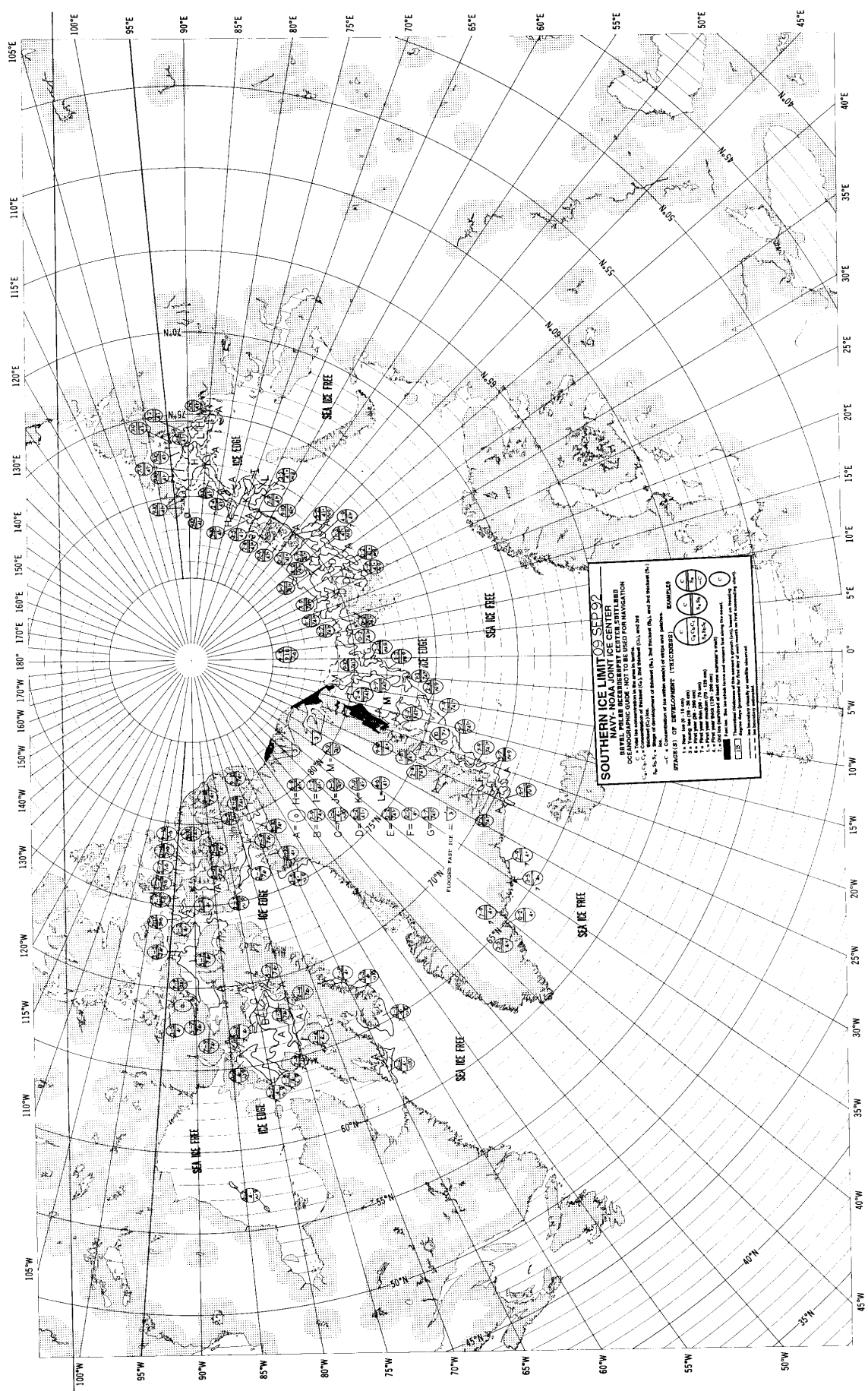
EXAMPLES:
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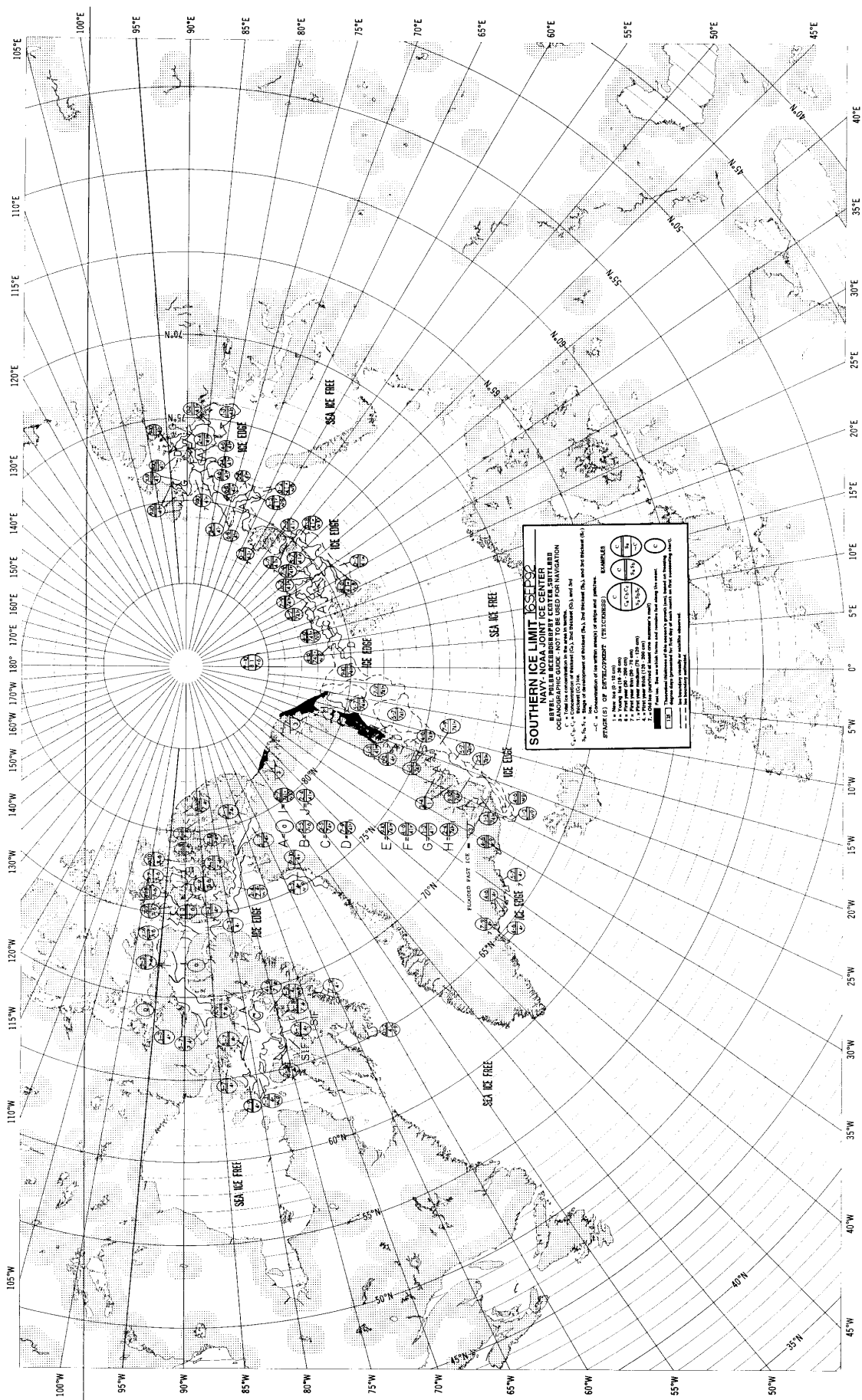
NOTES:
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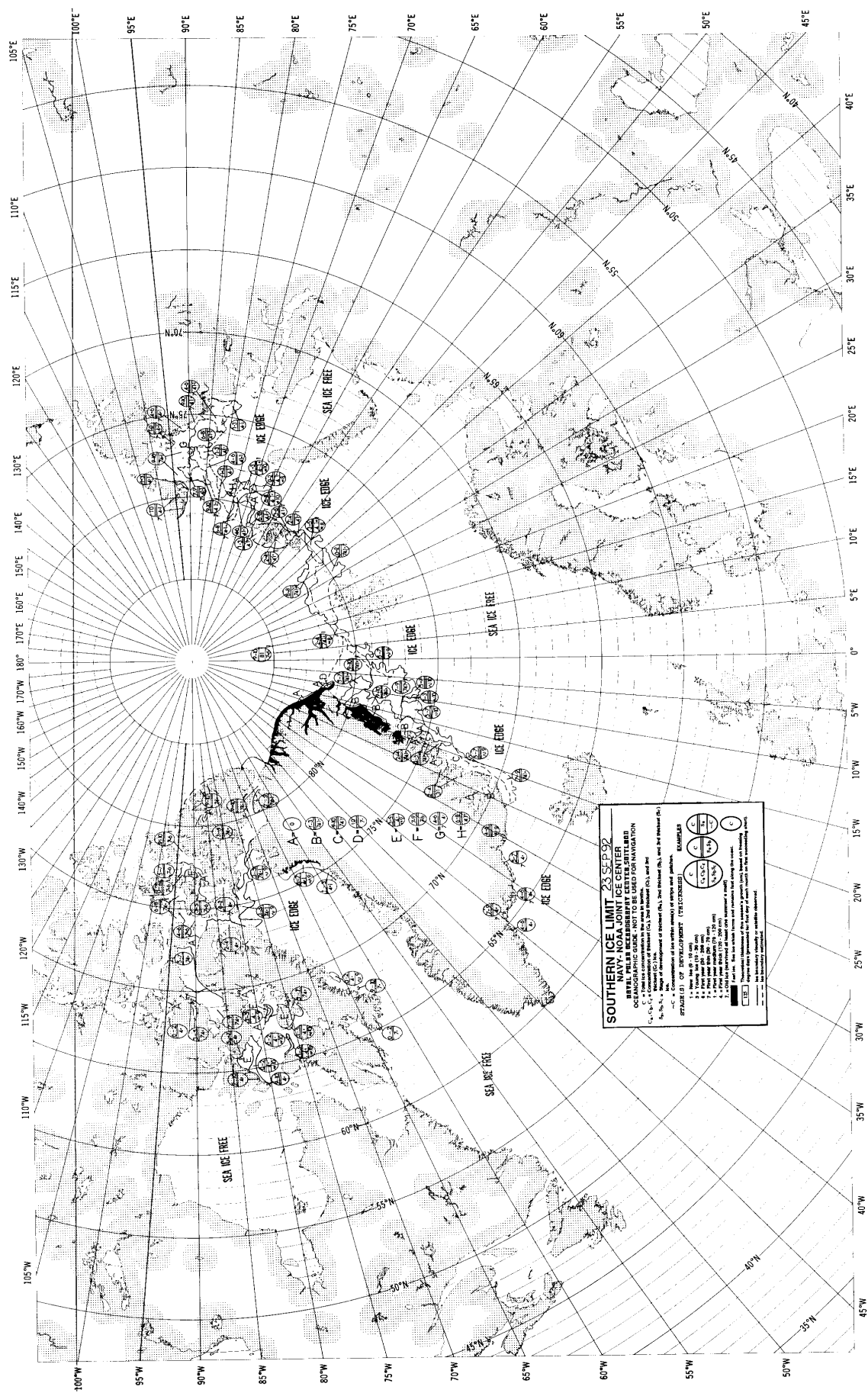


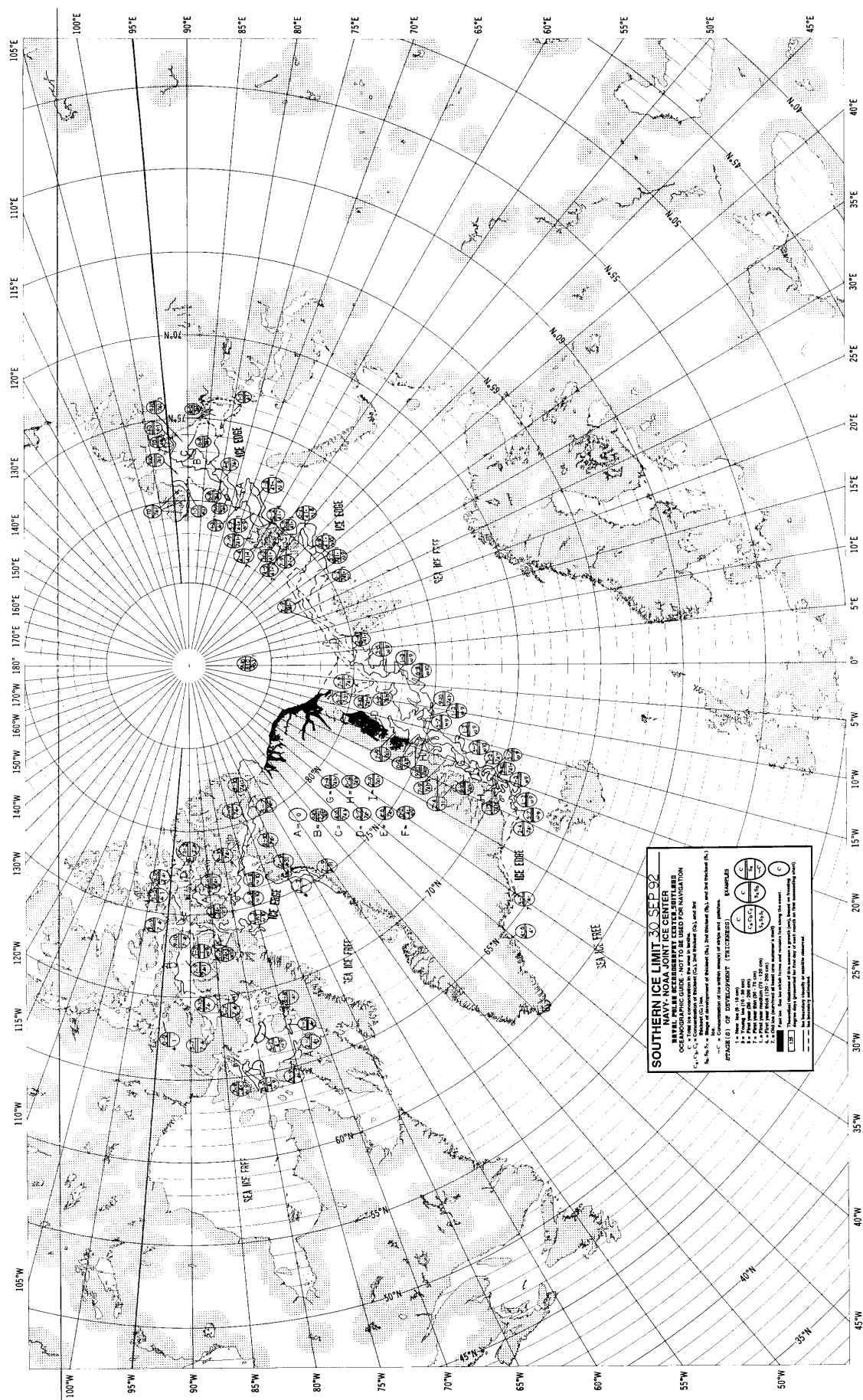


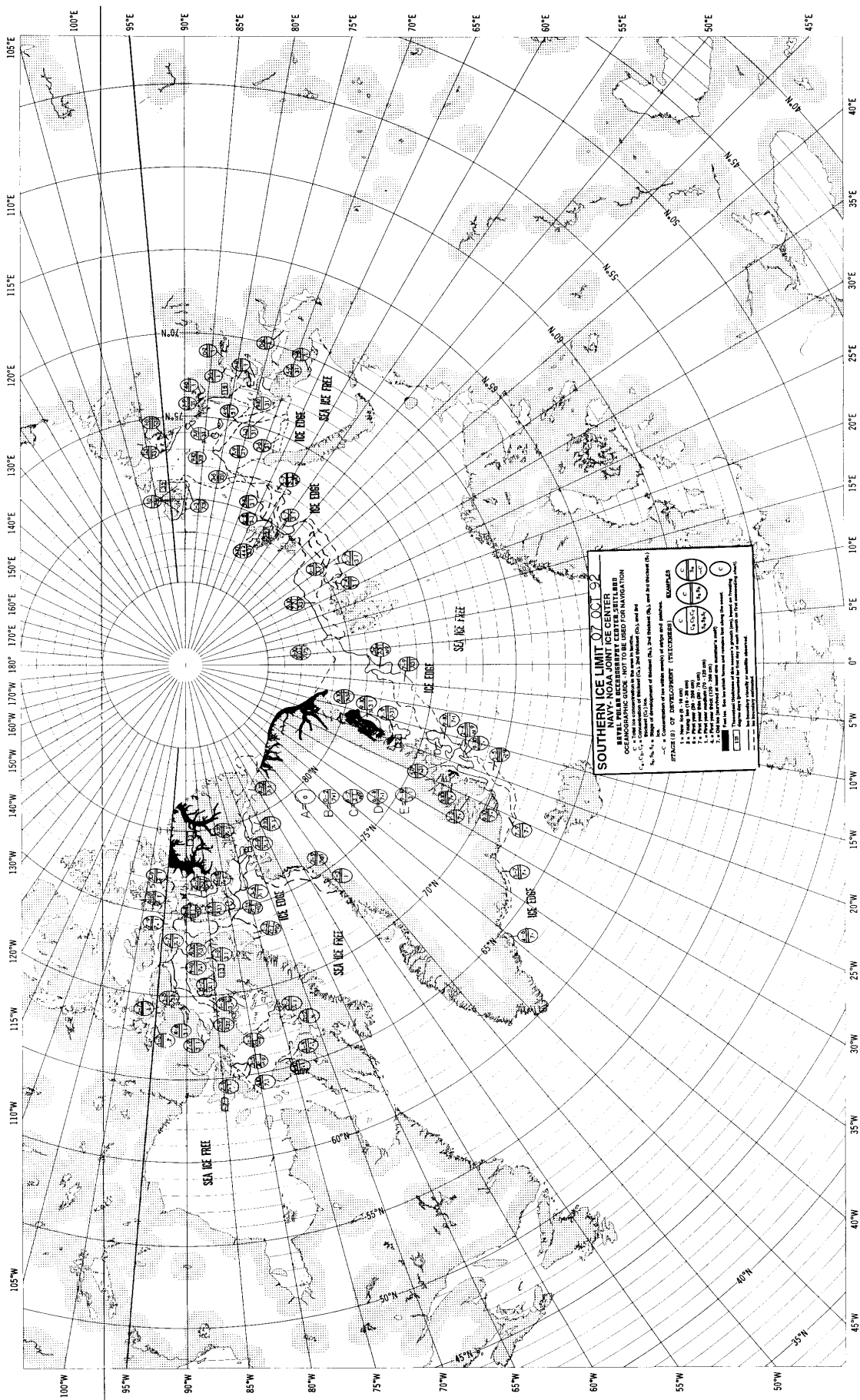


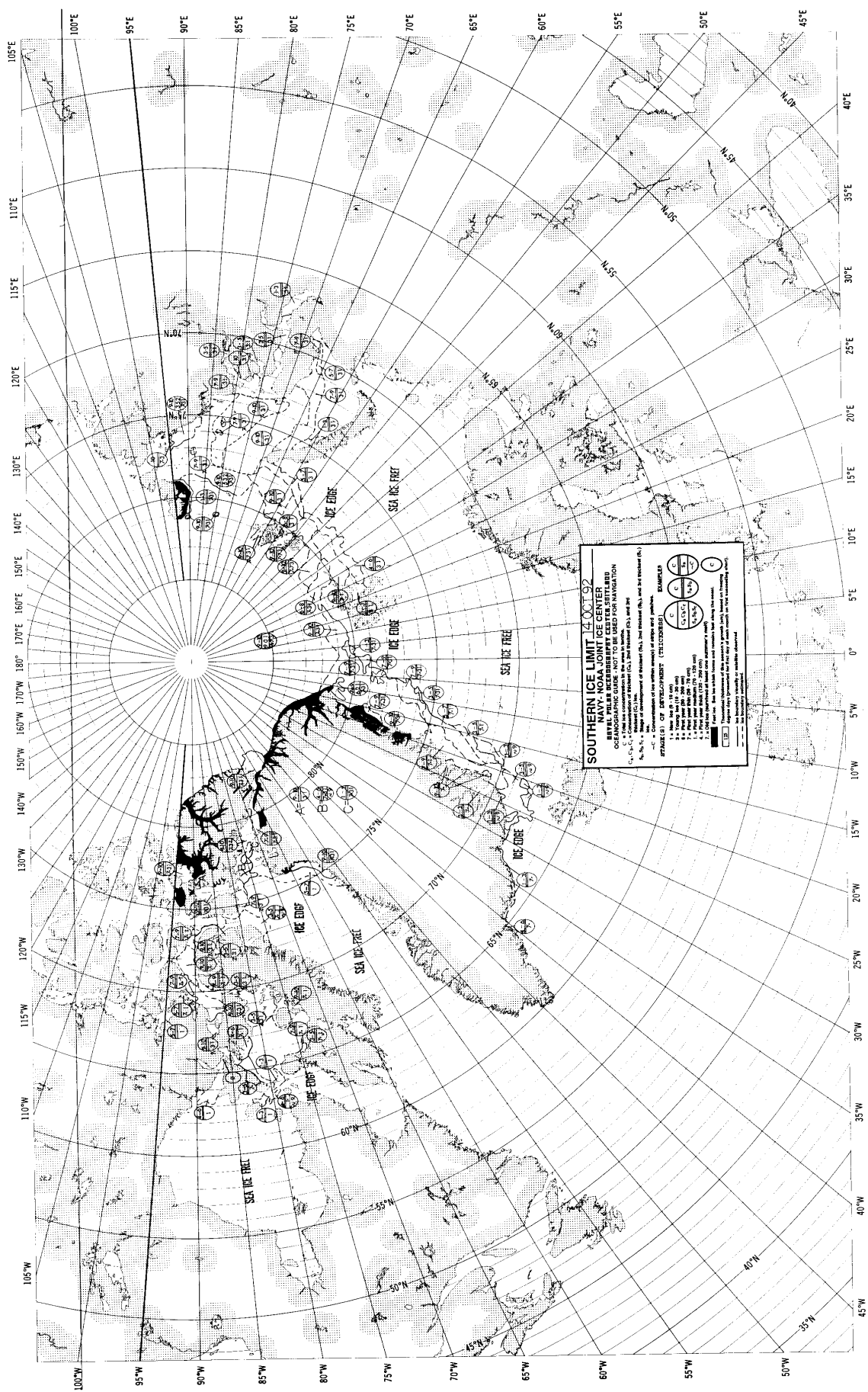


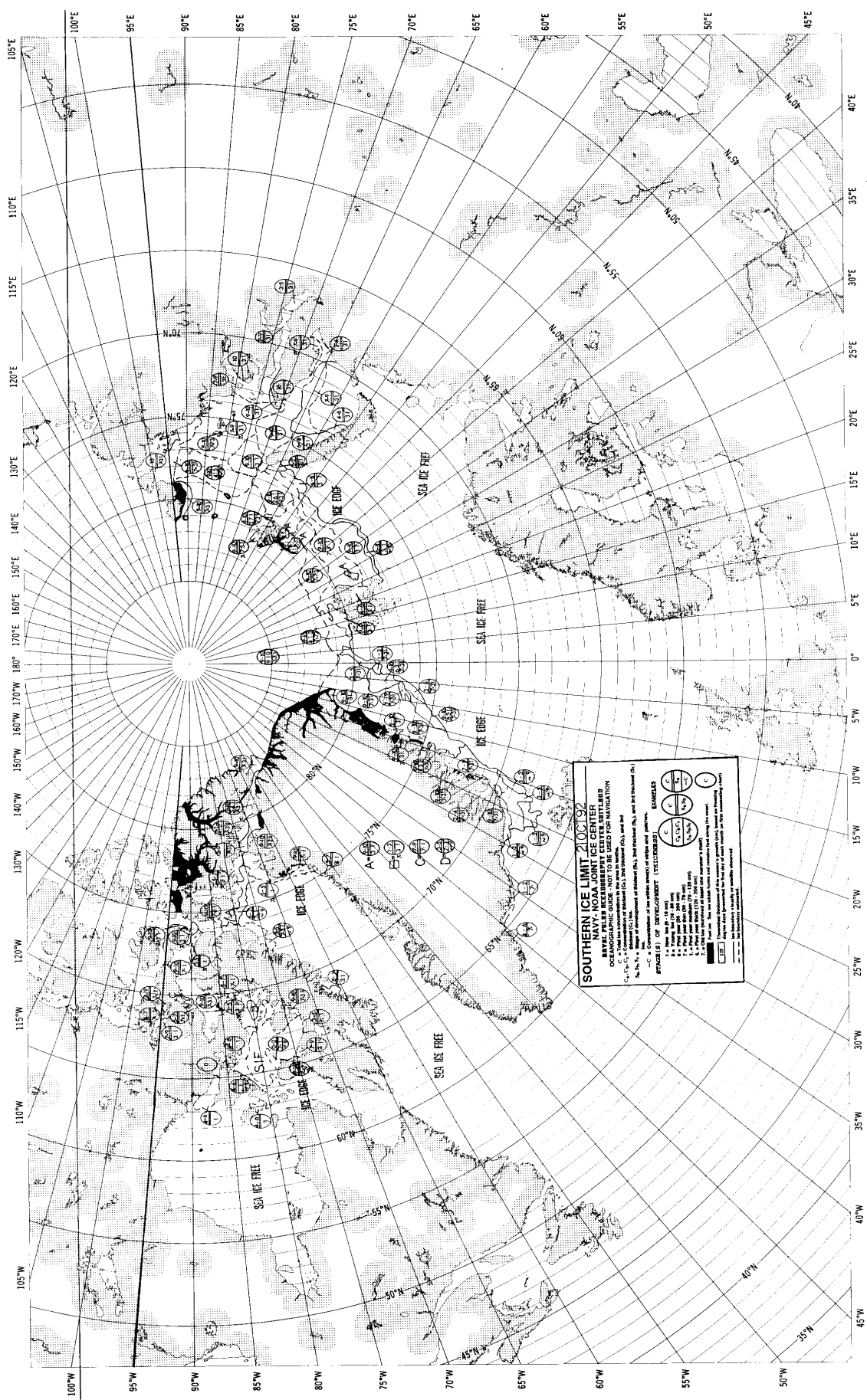


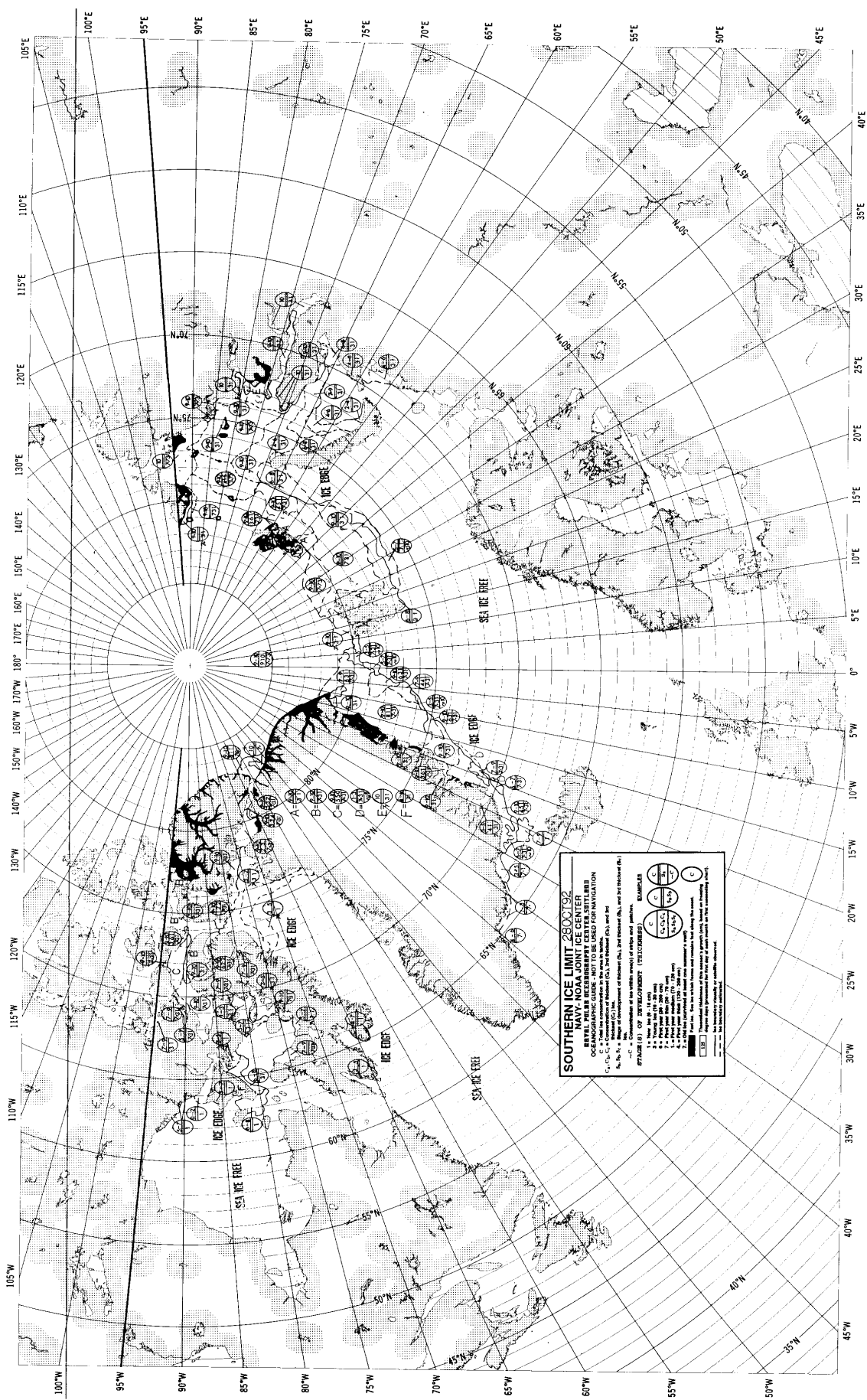


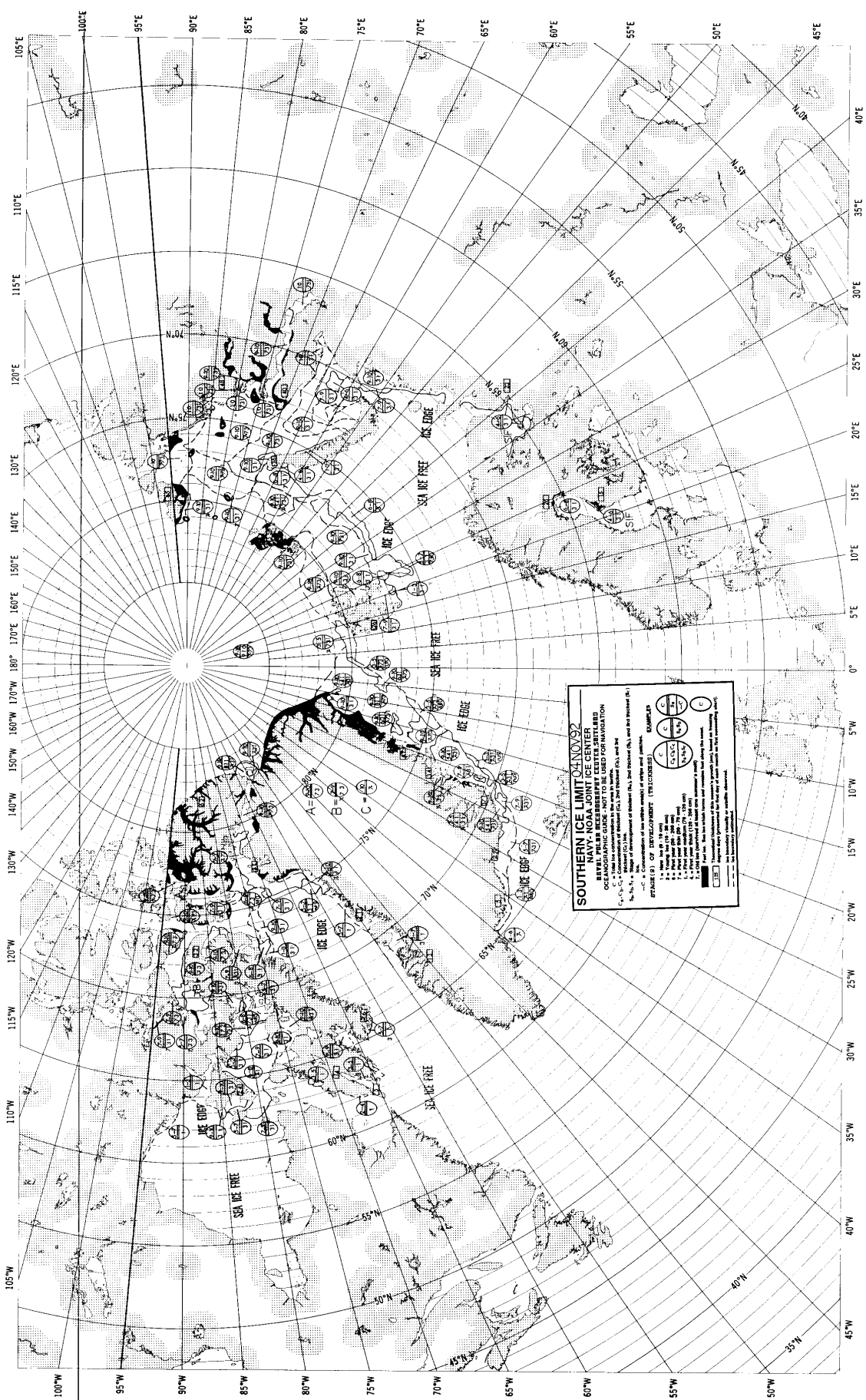


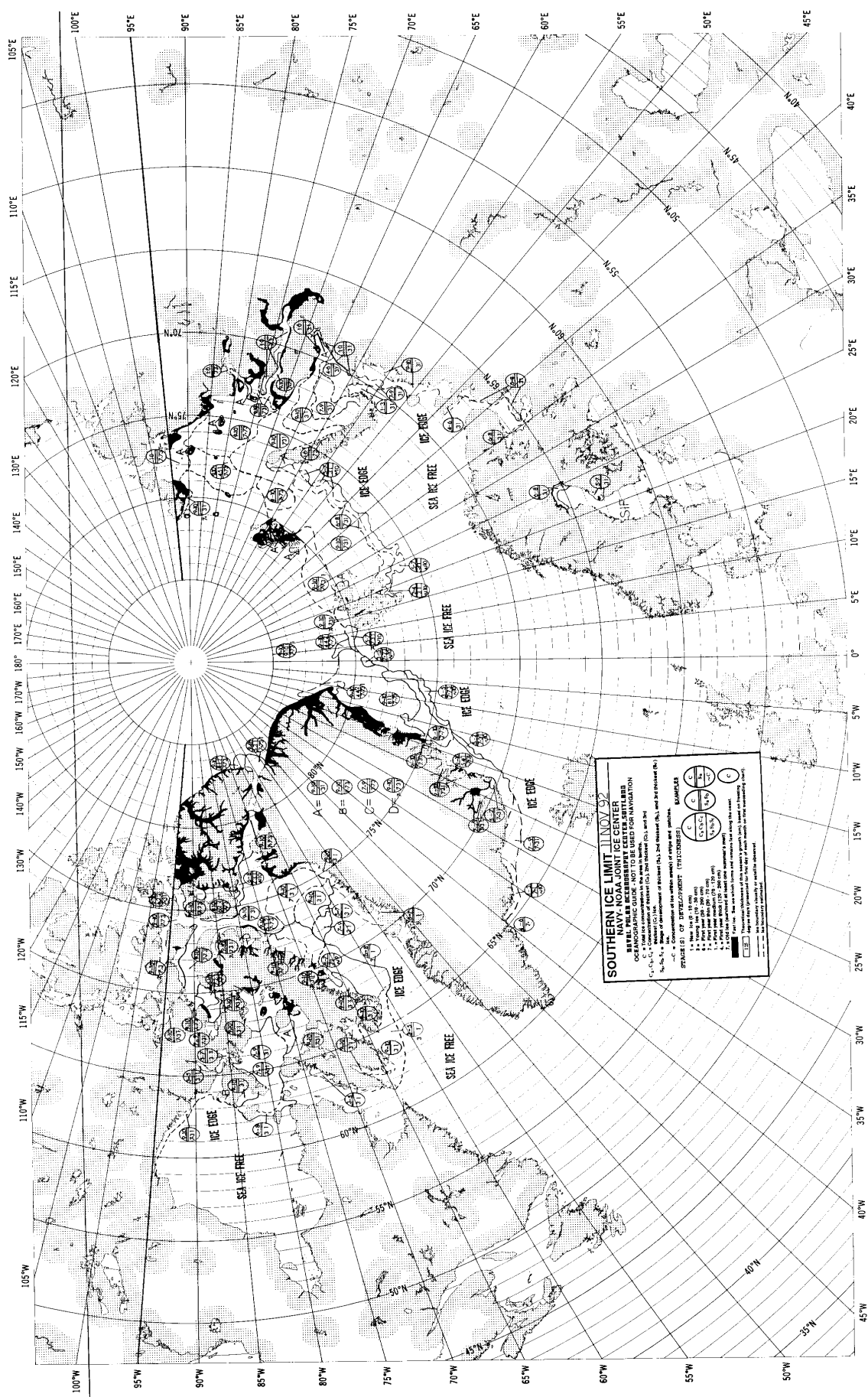


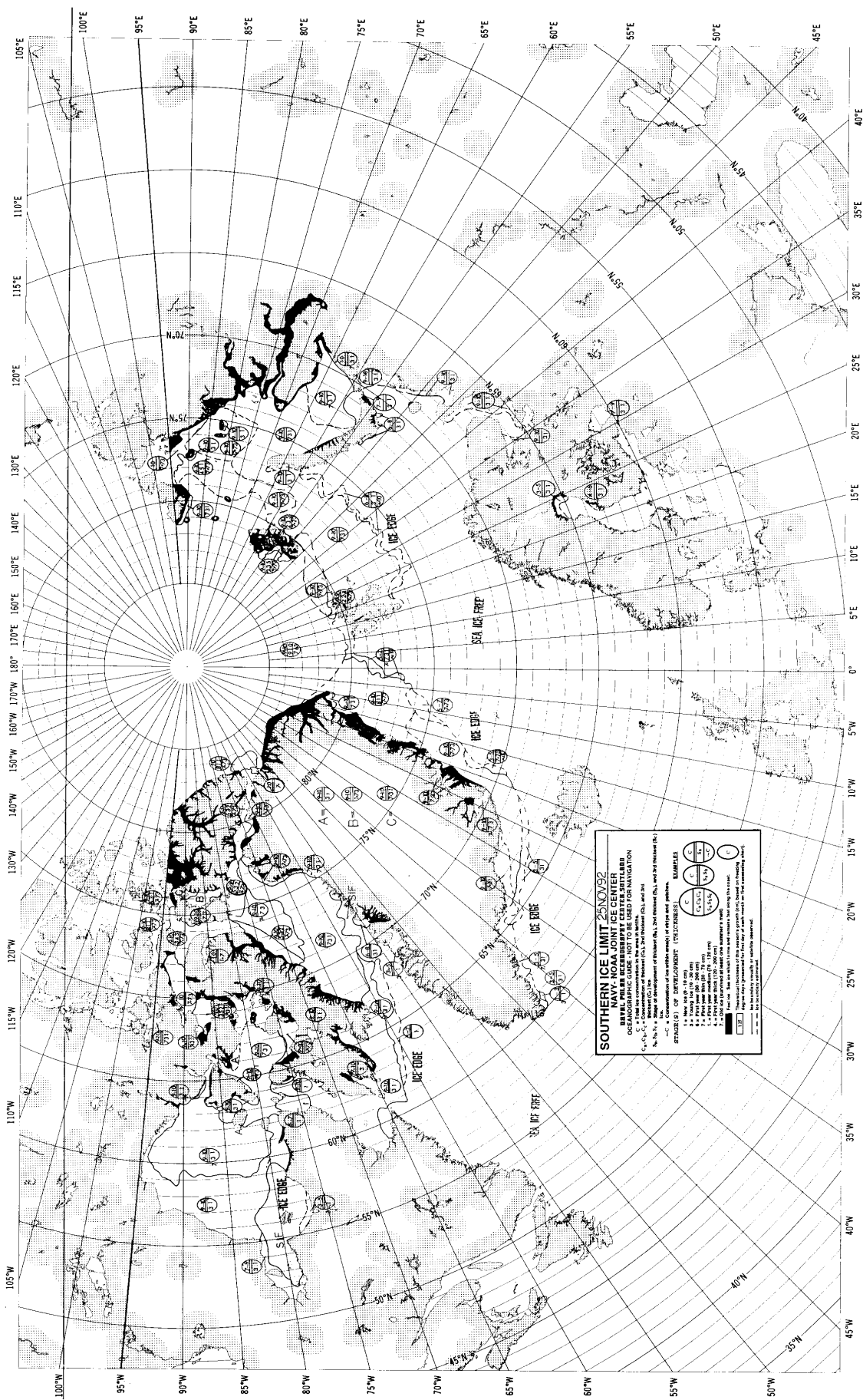


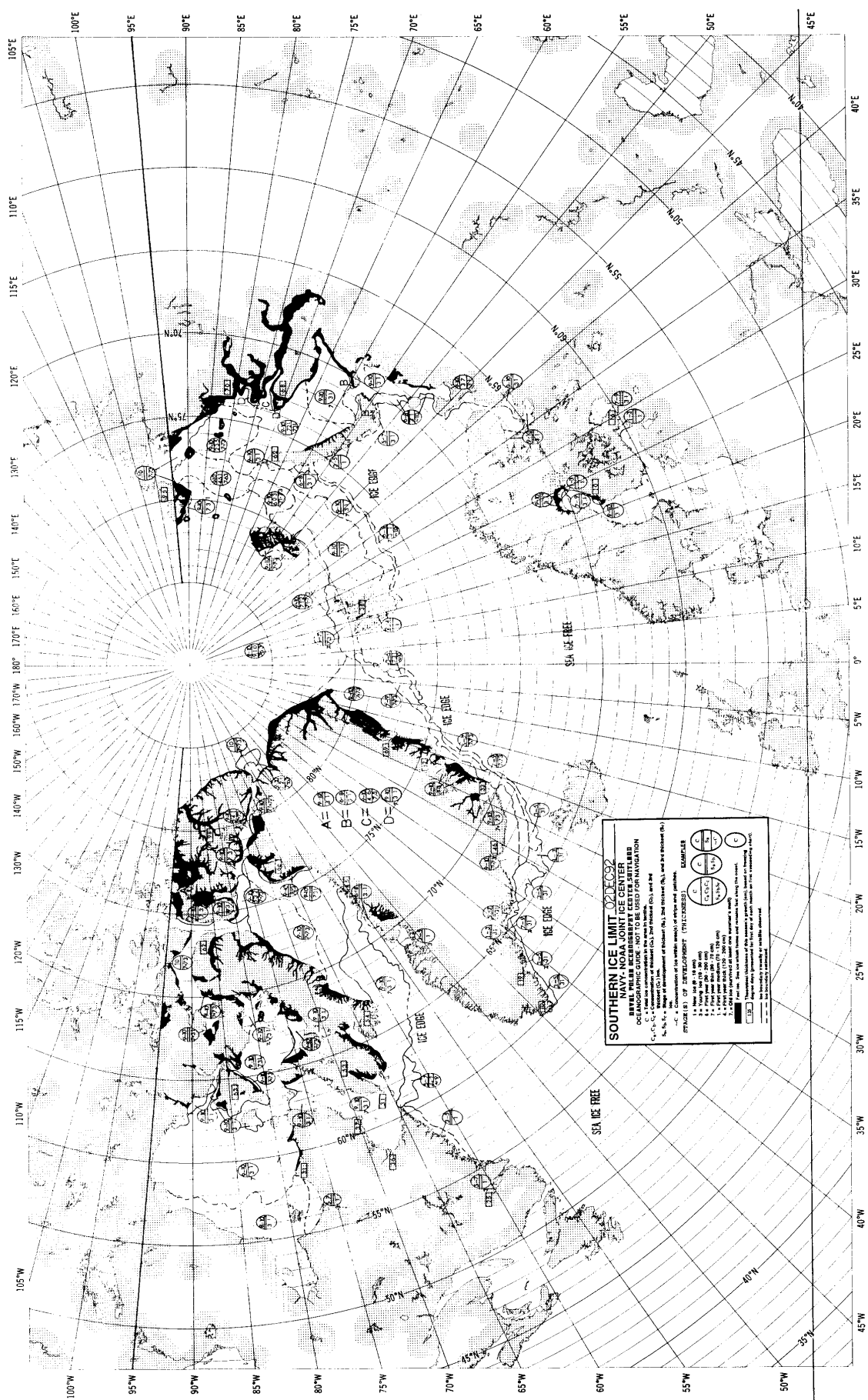


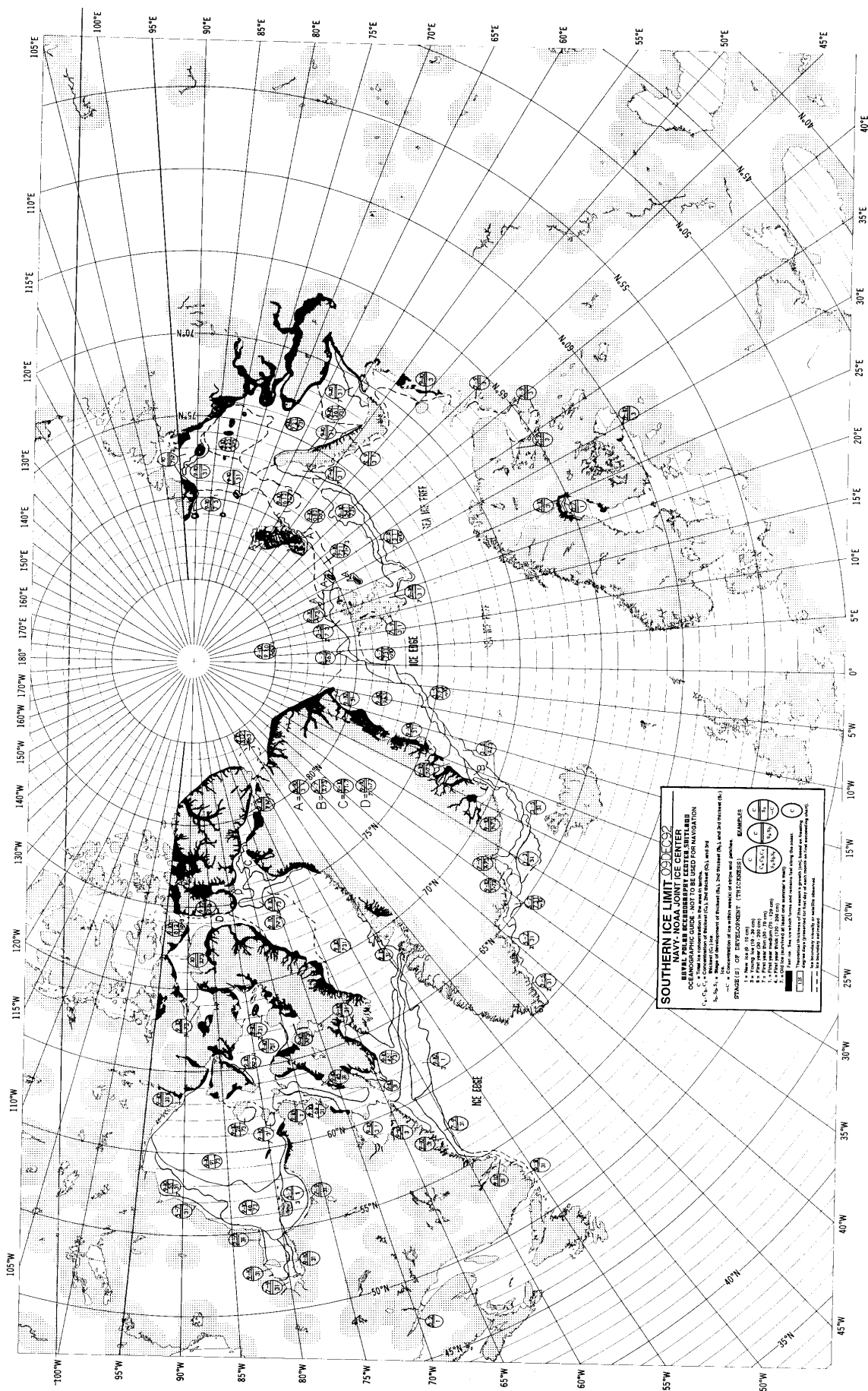


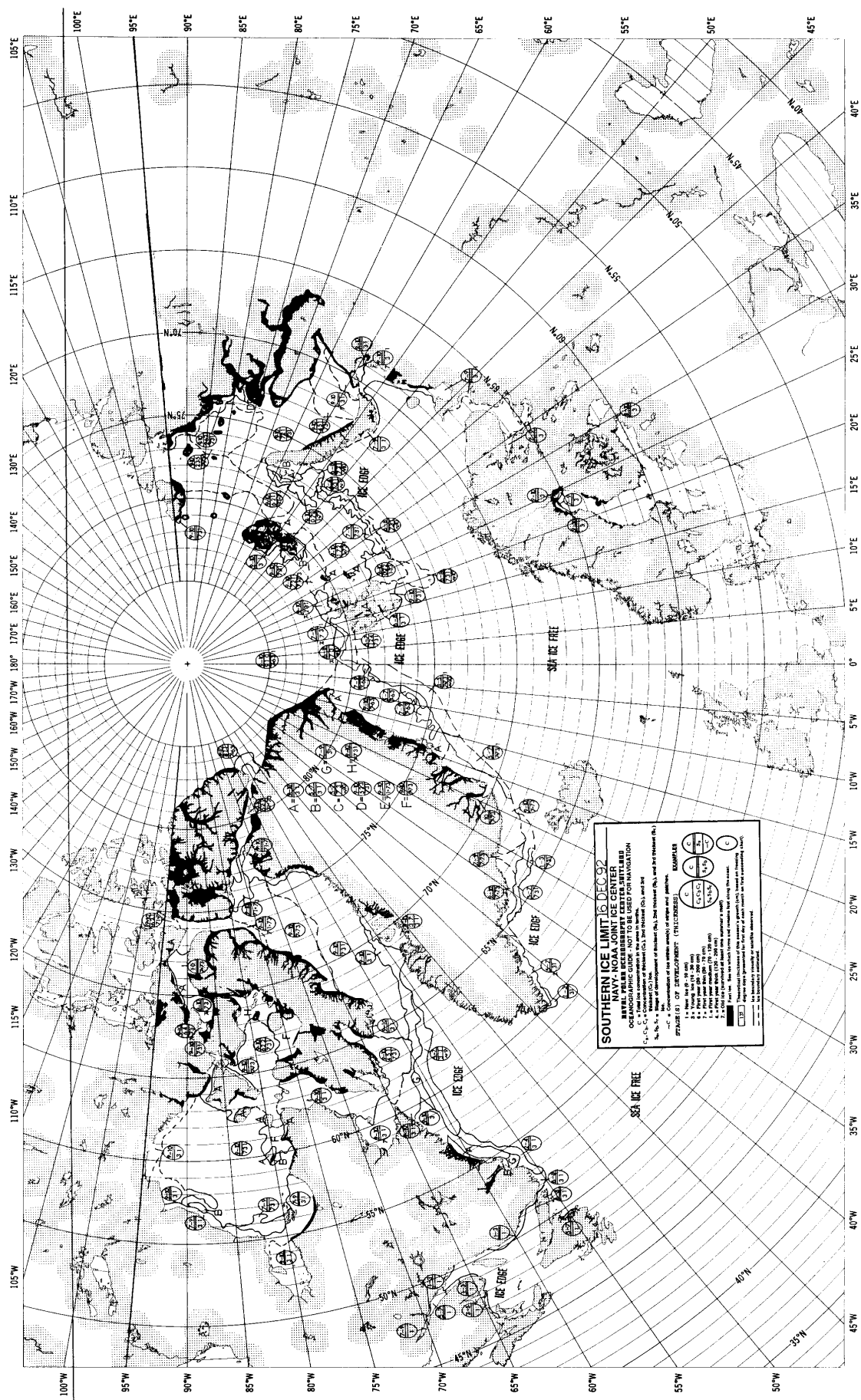


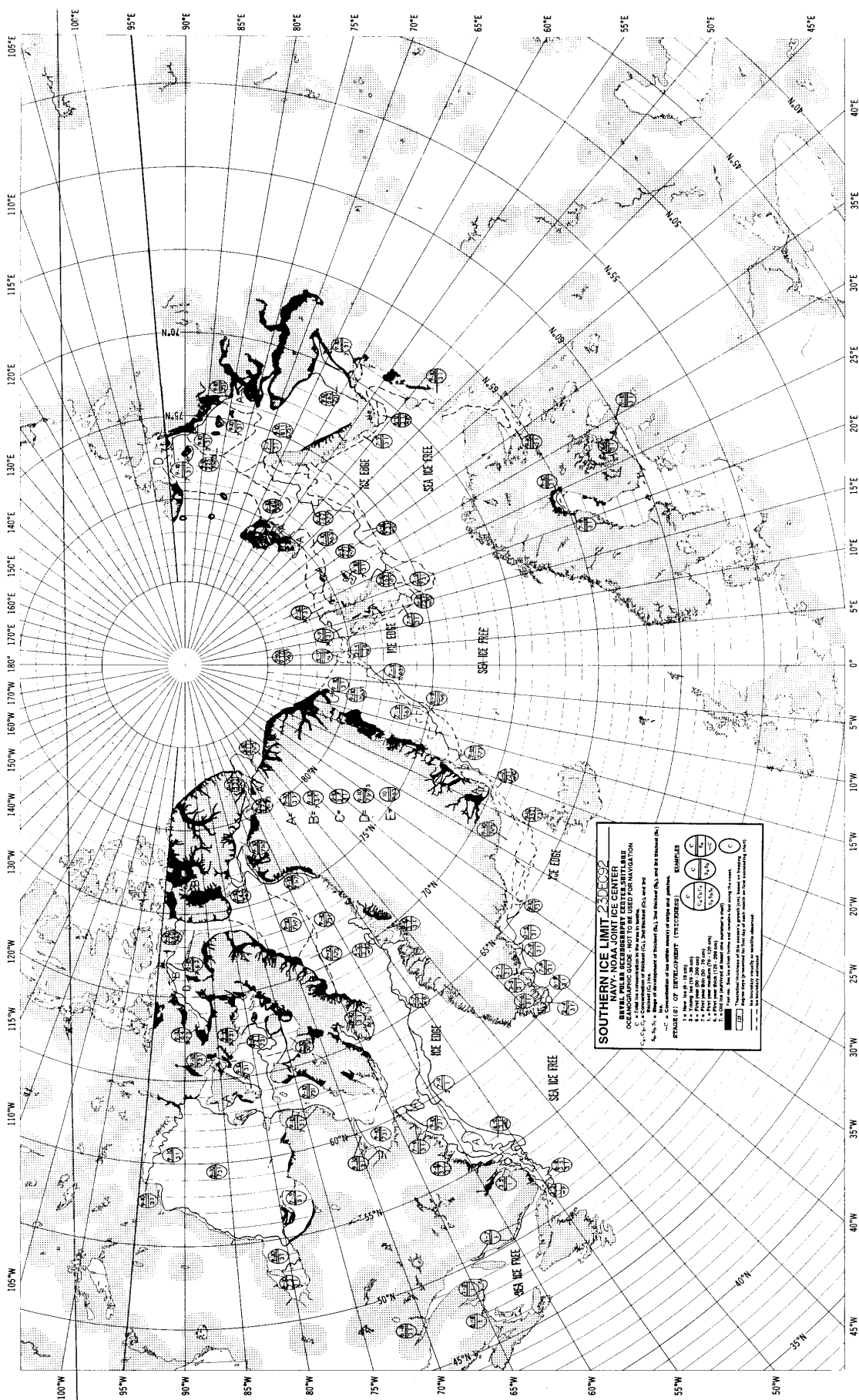


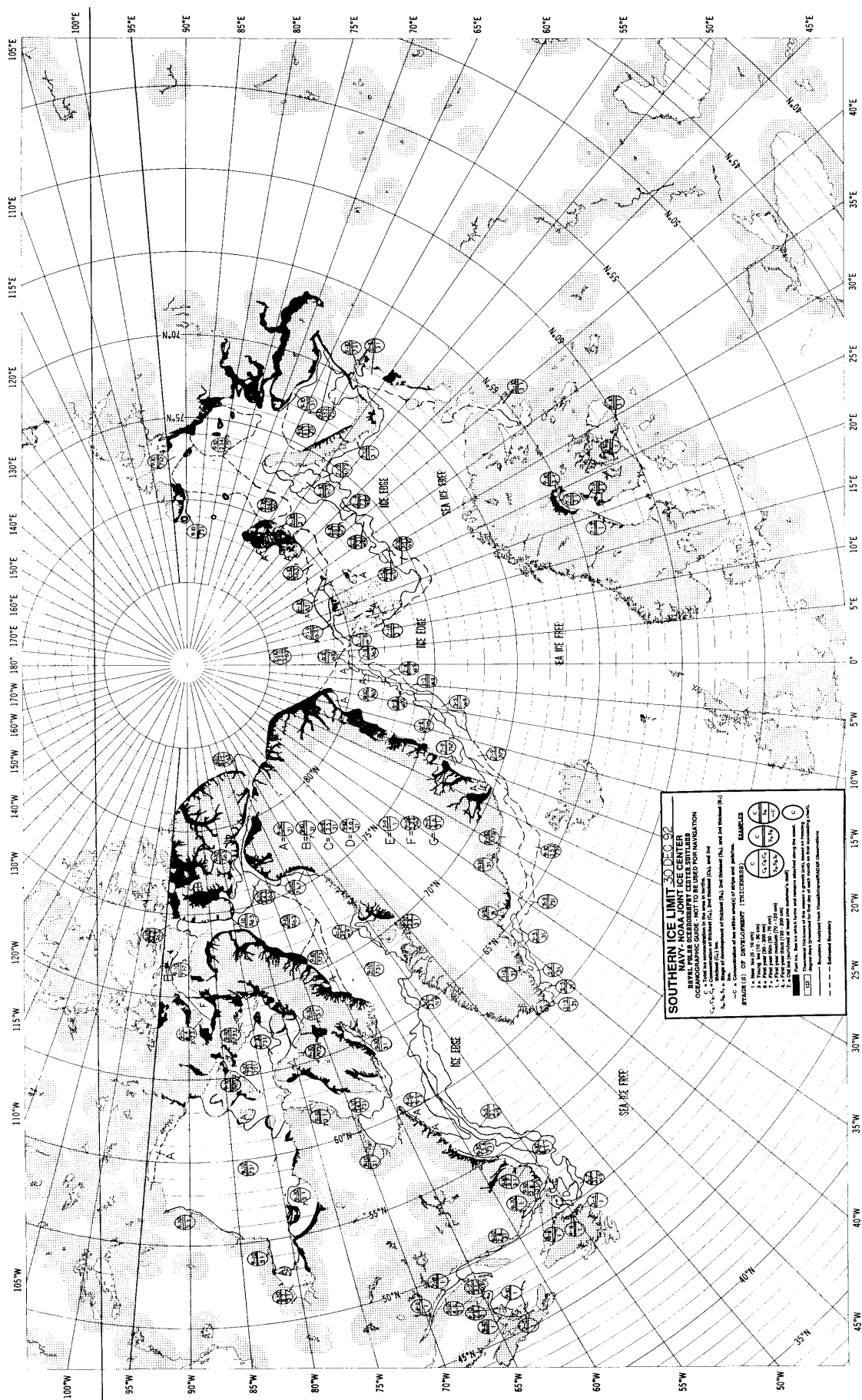


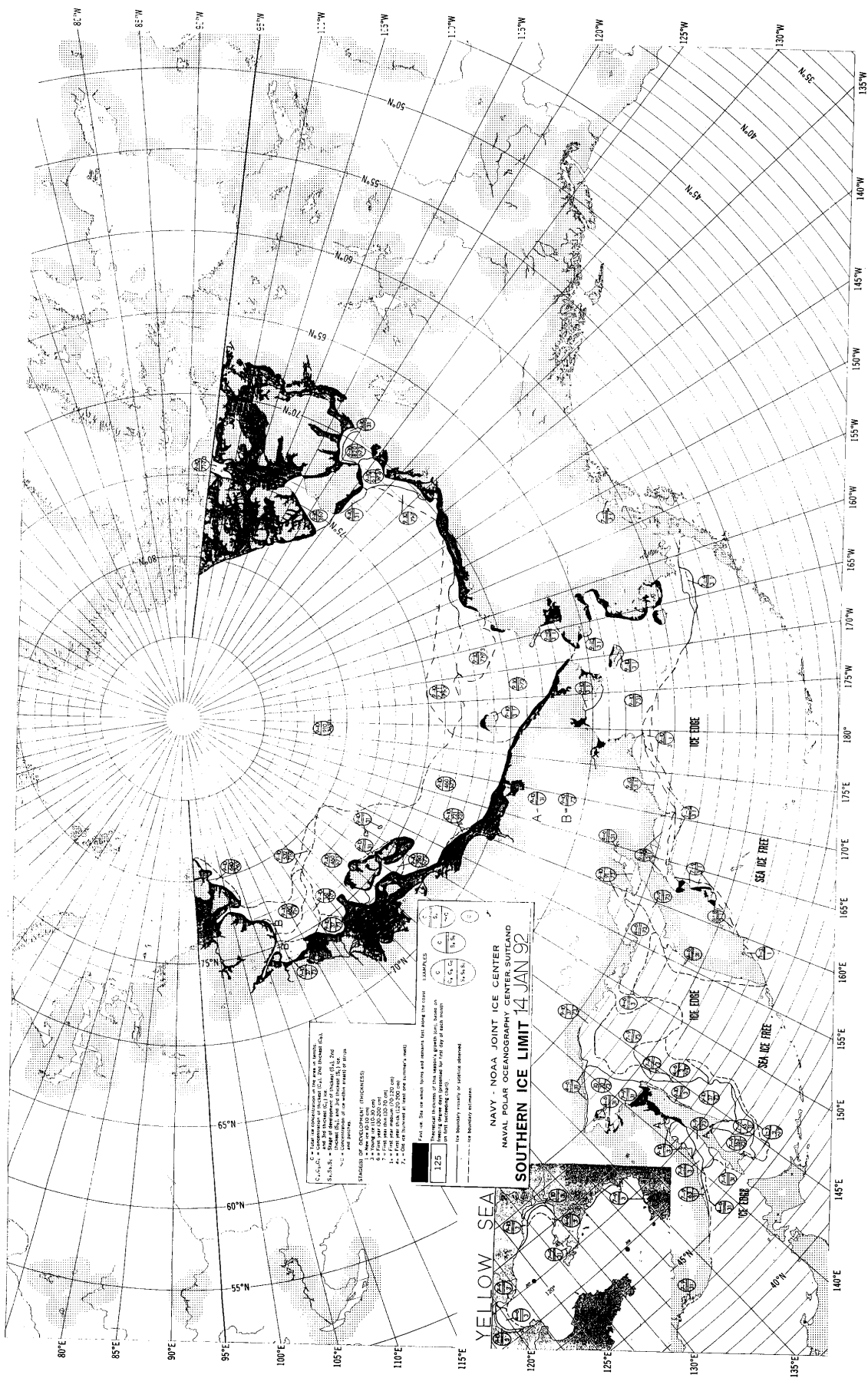


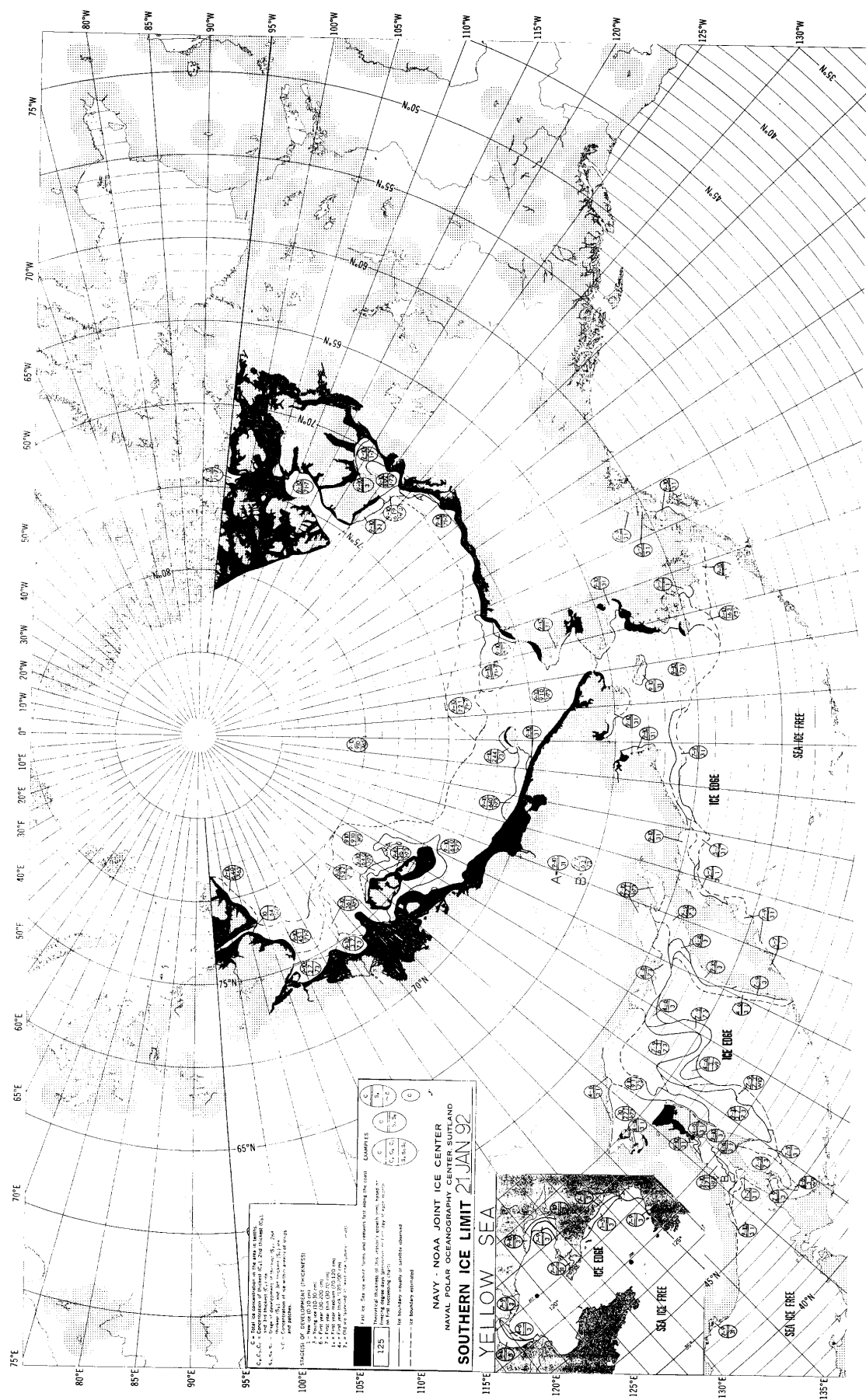


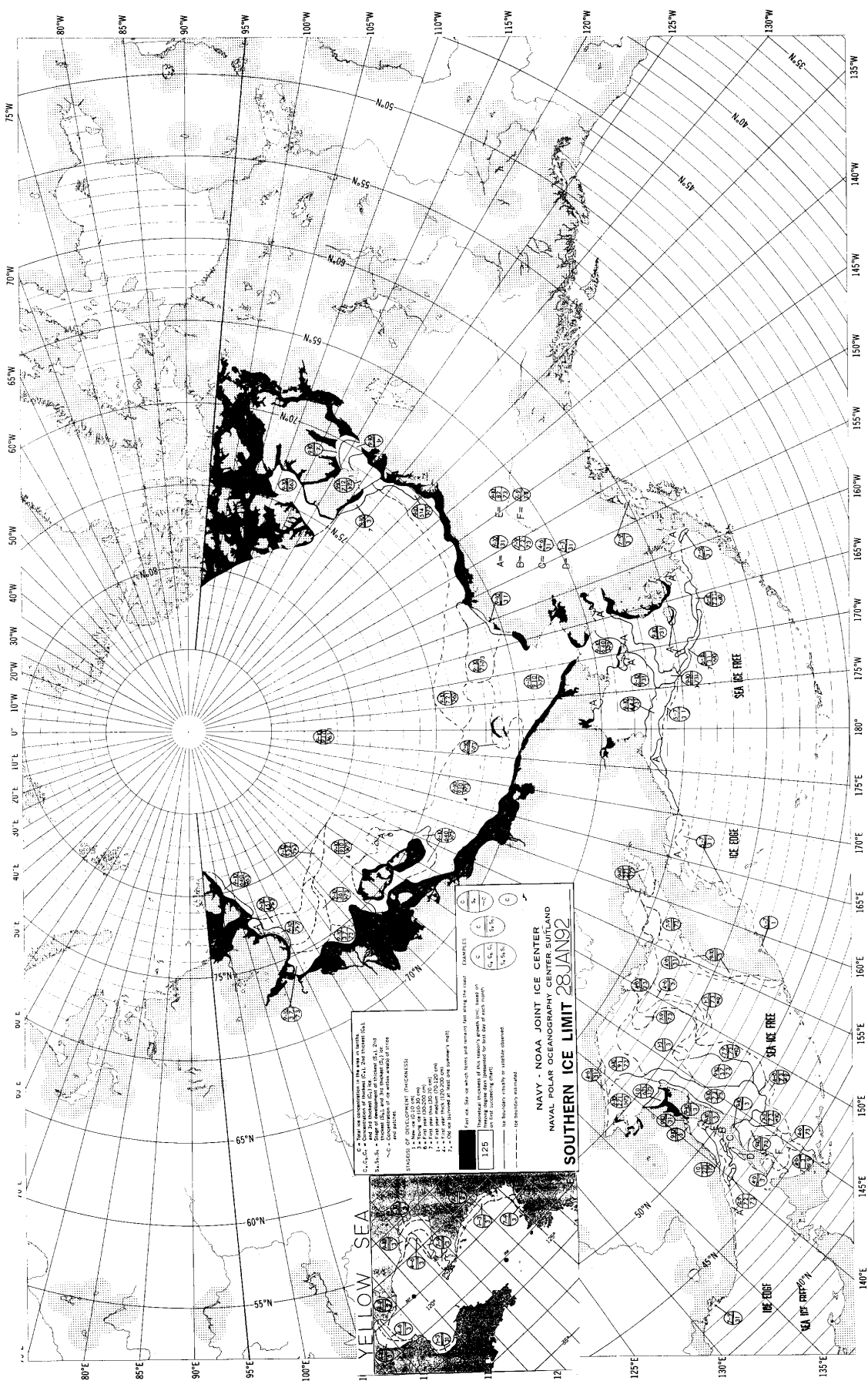


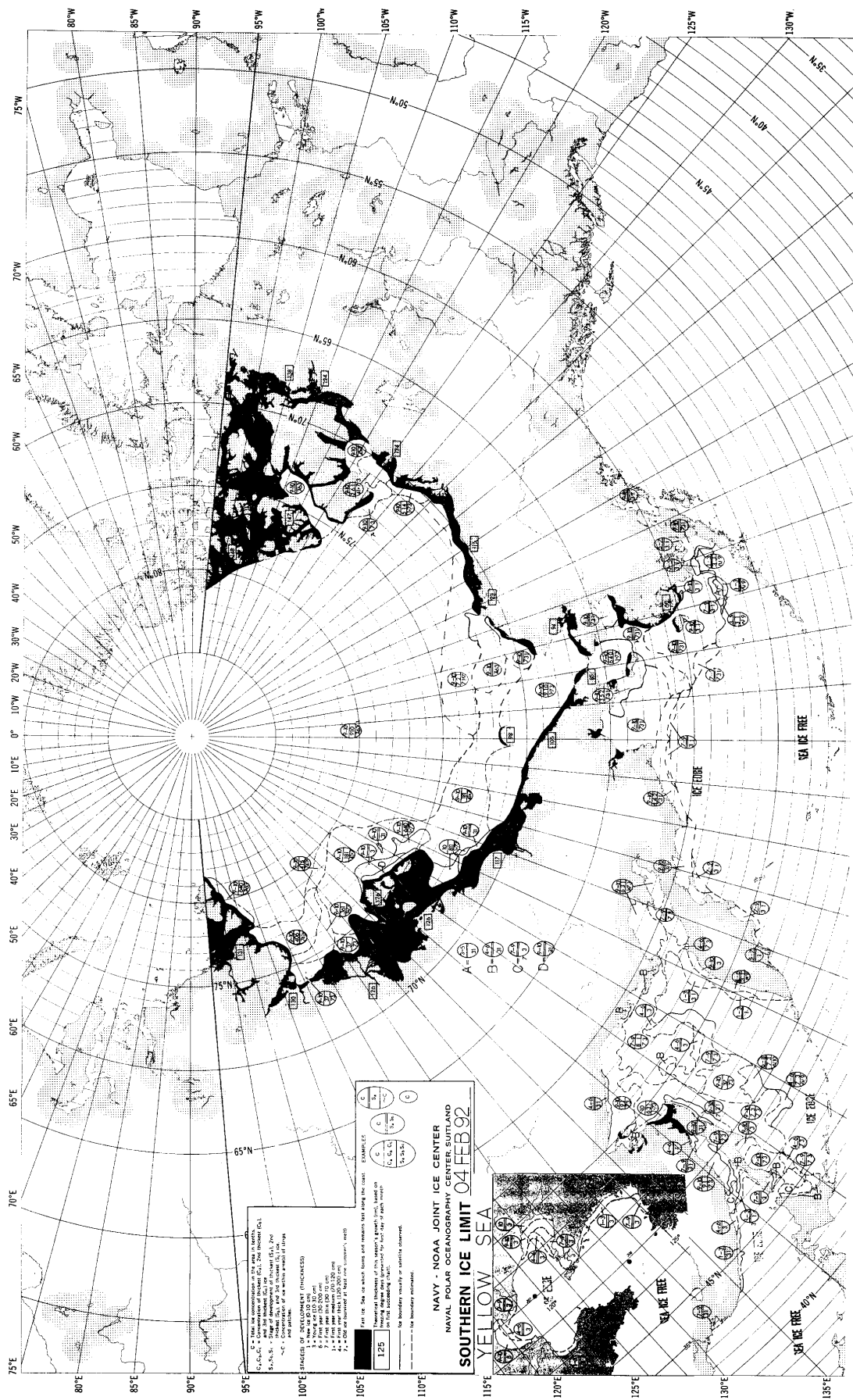


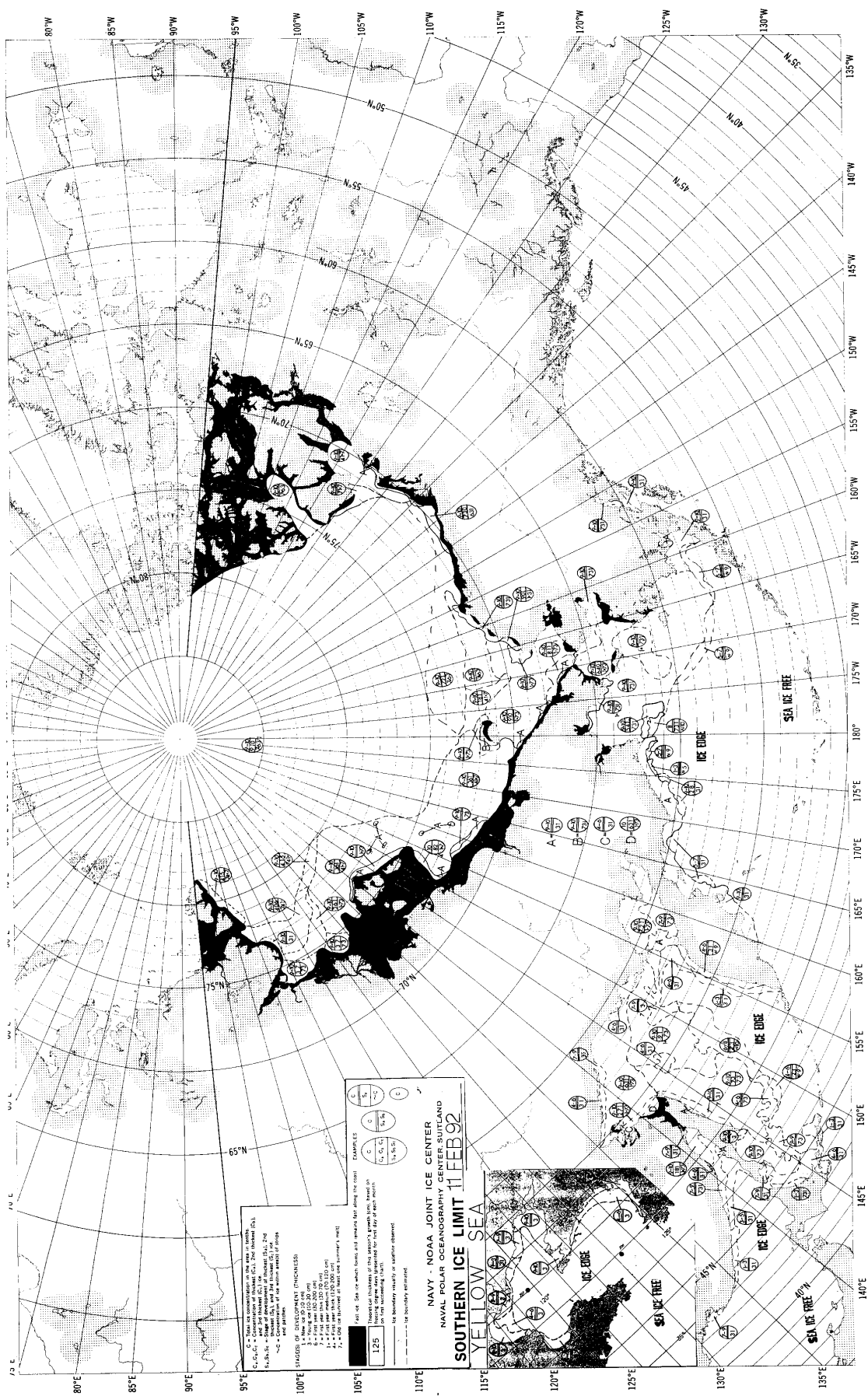


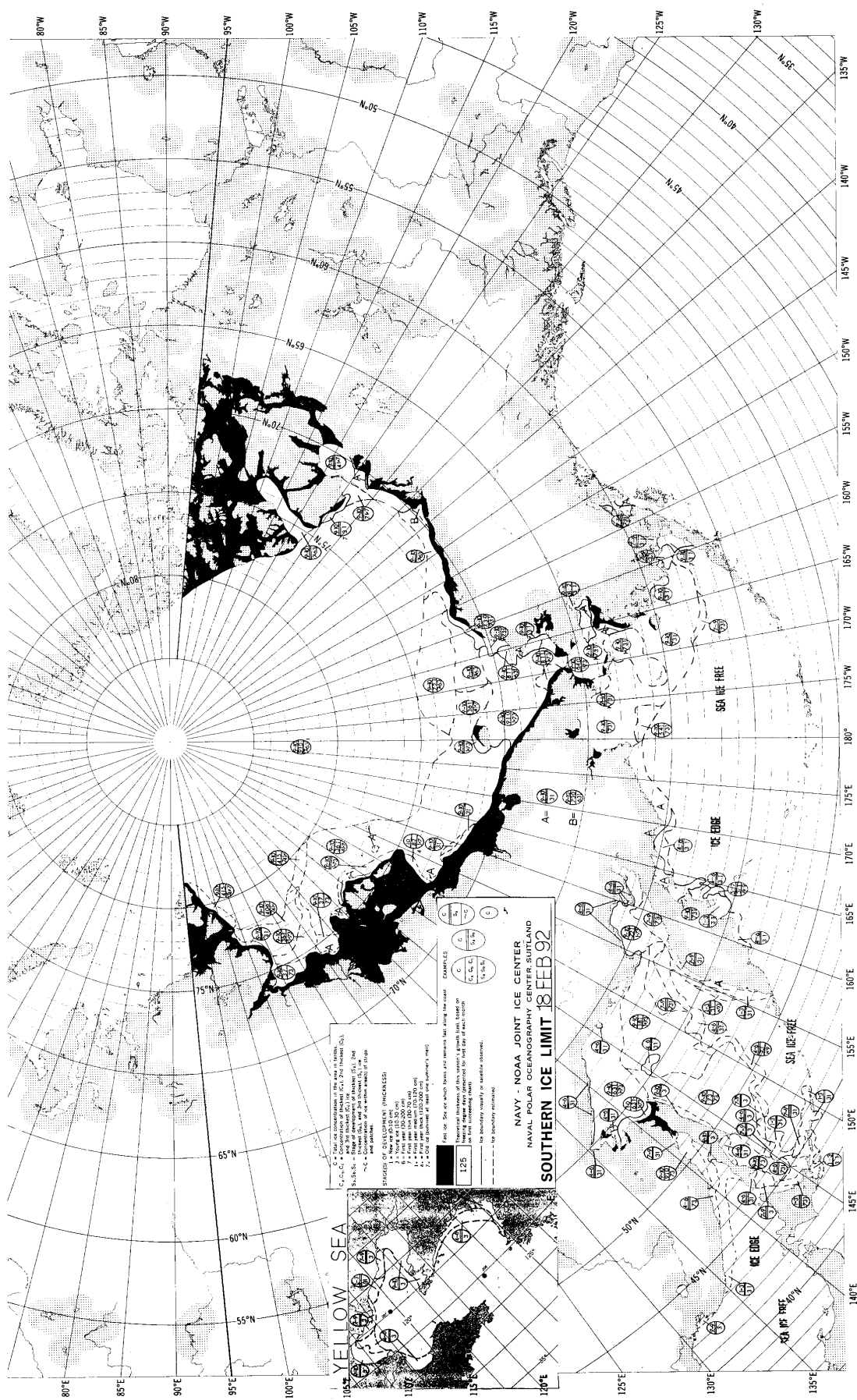


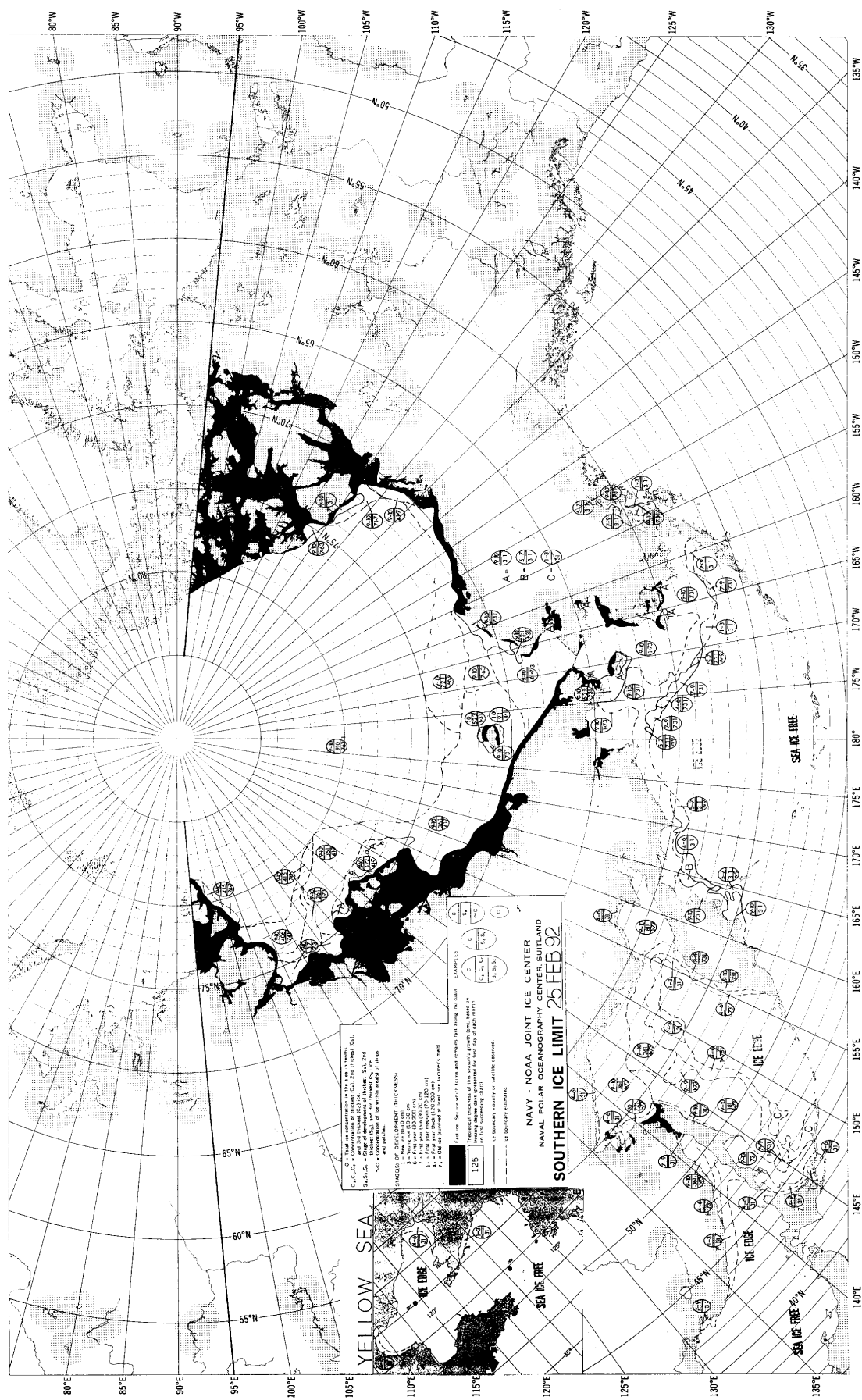


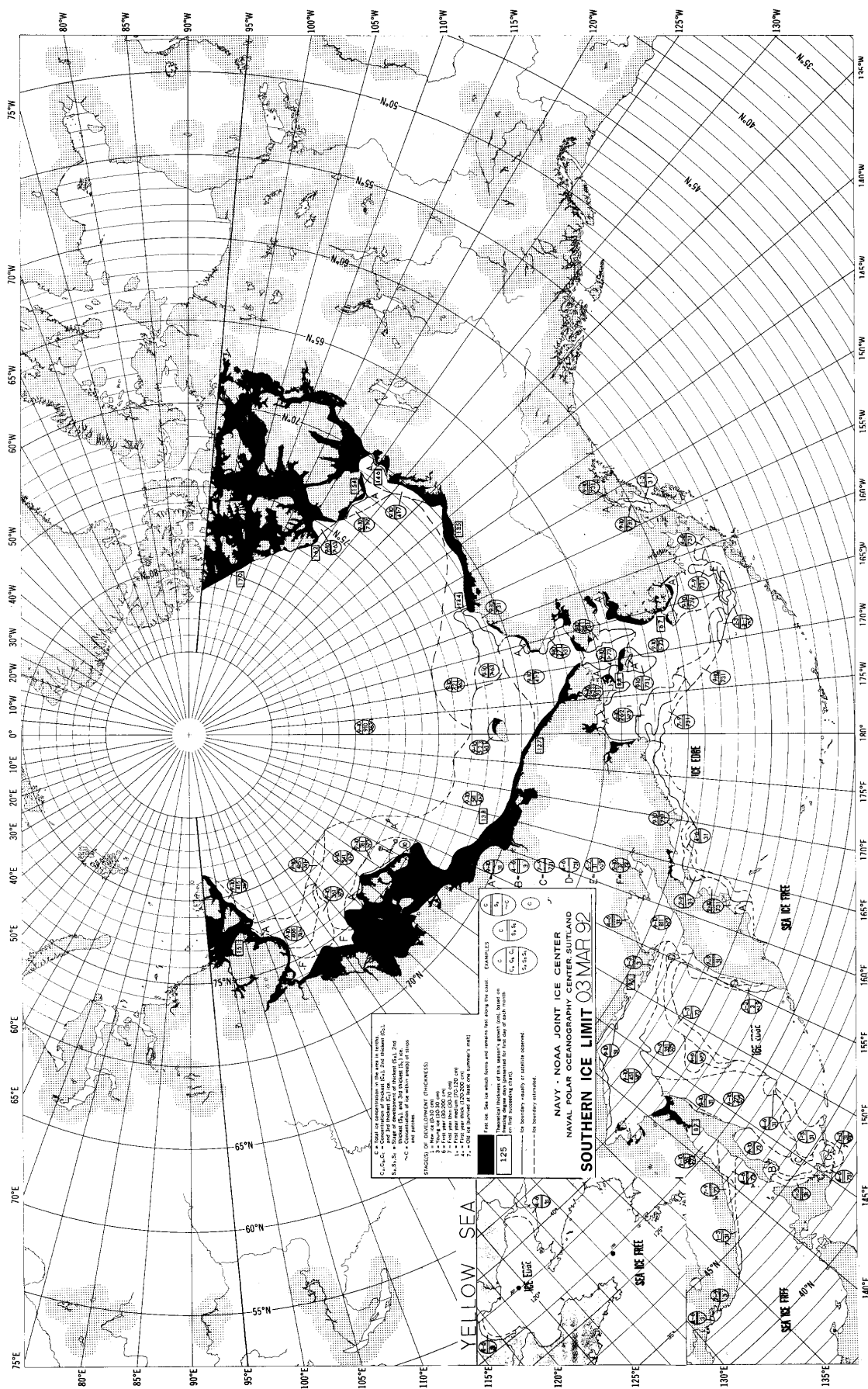


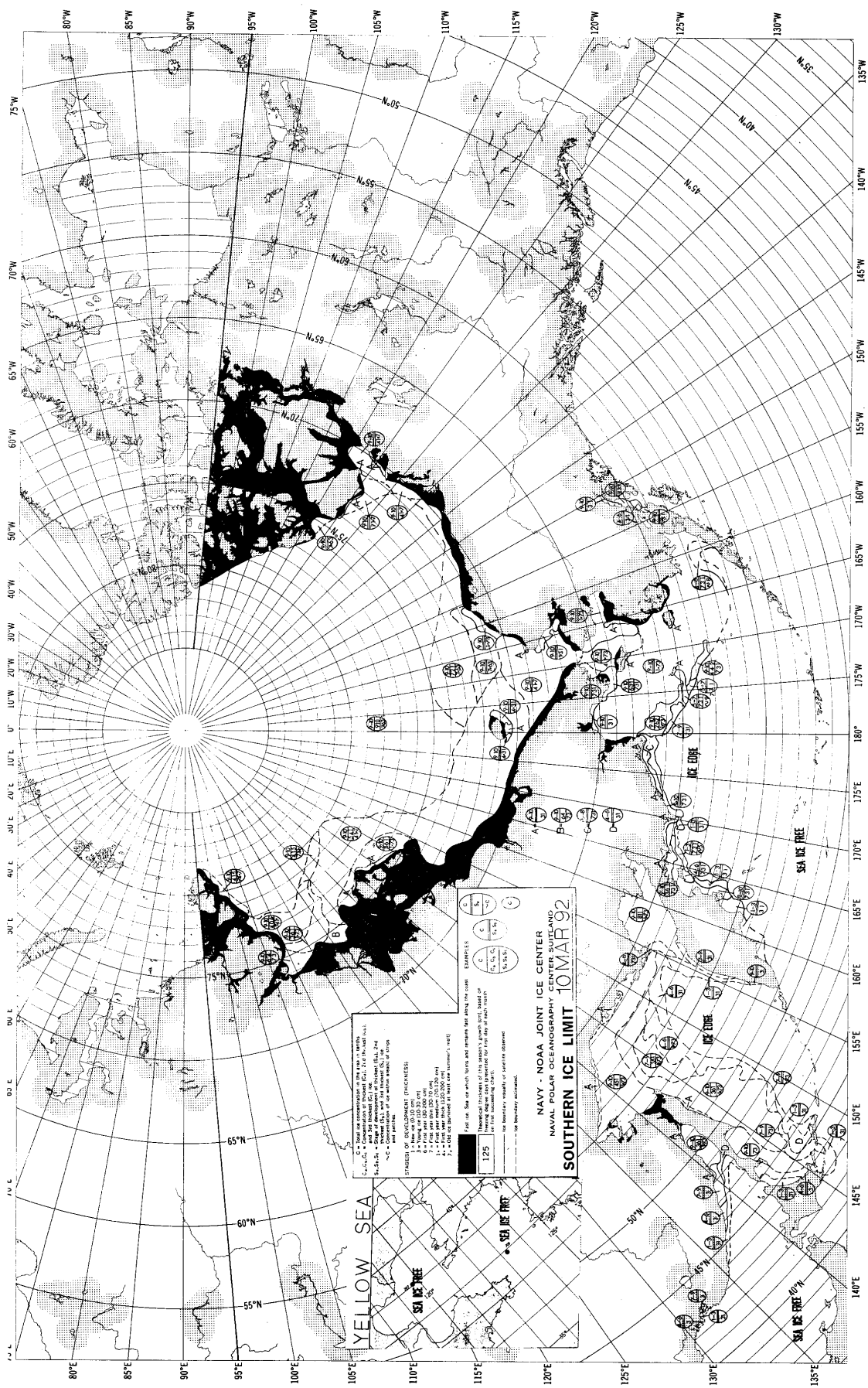


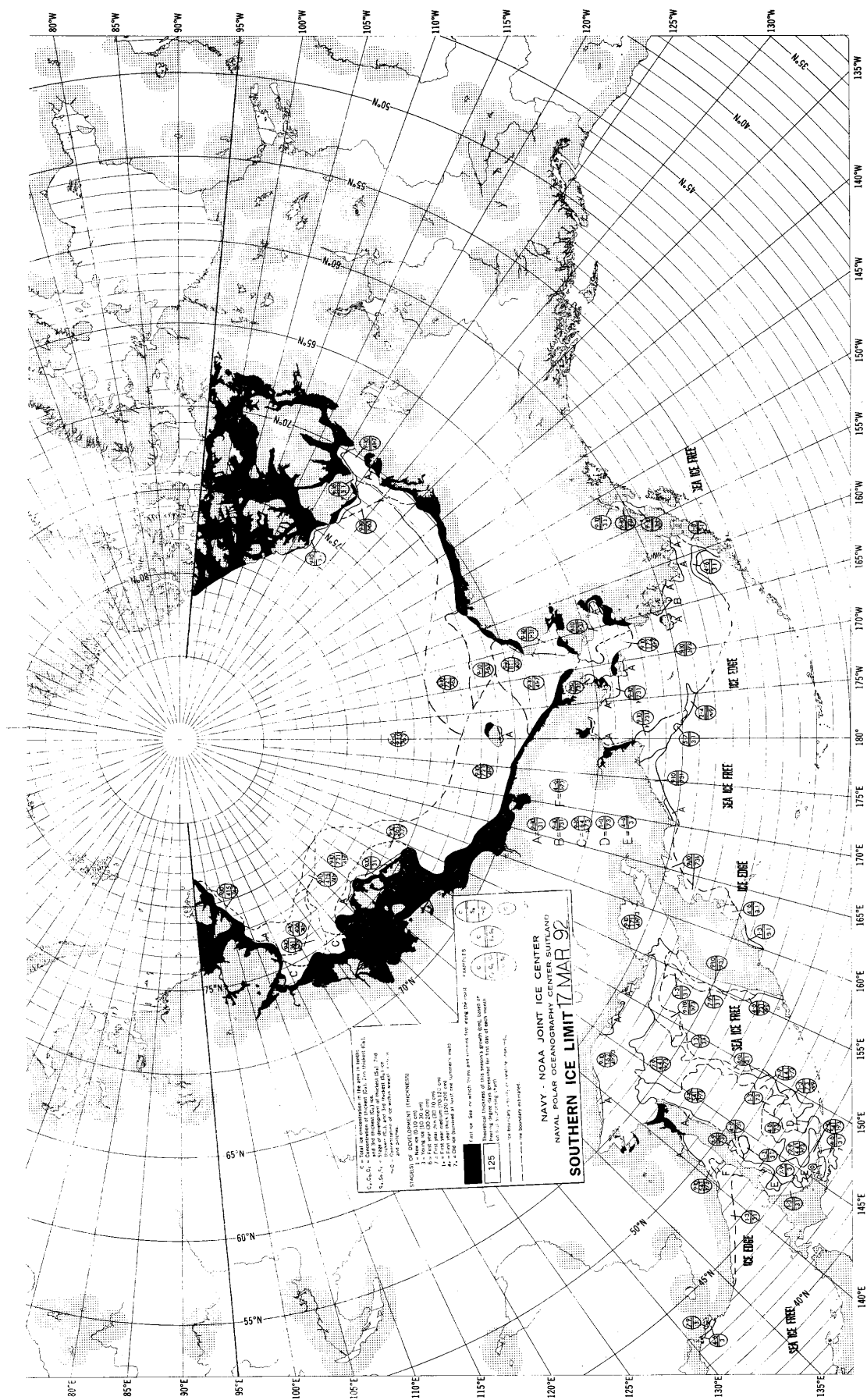


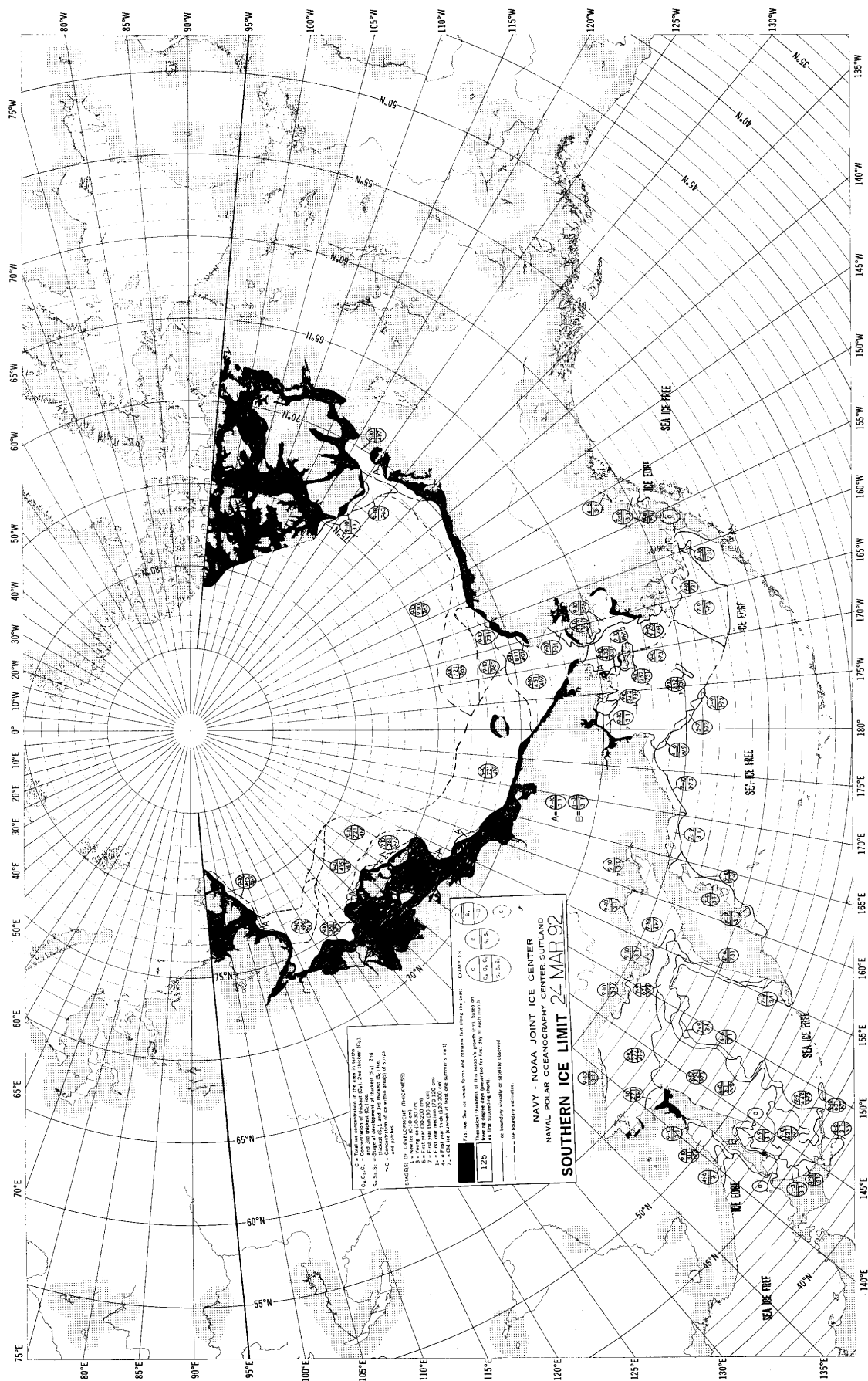


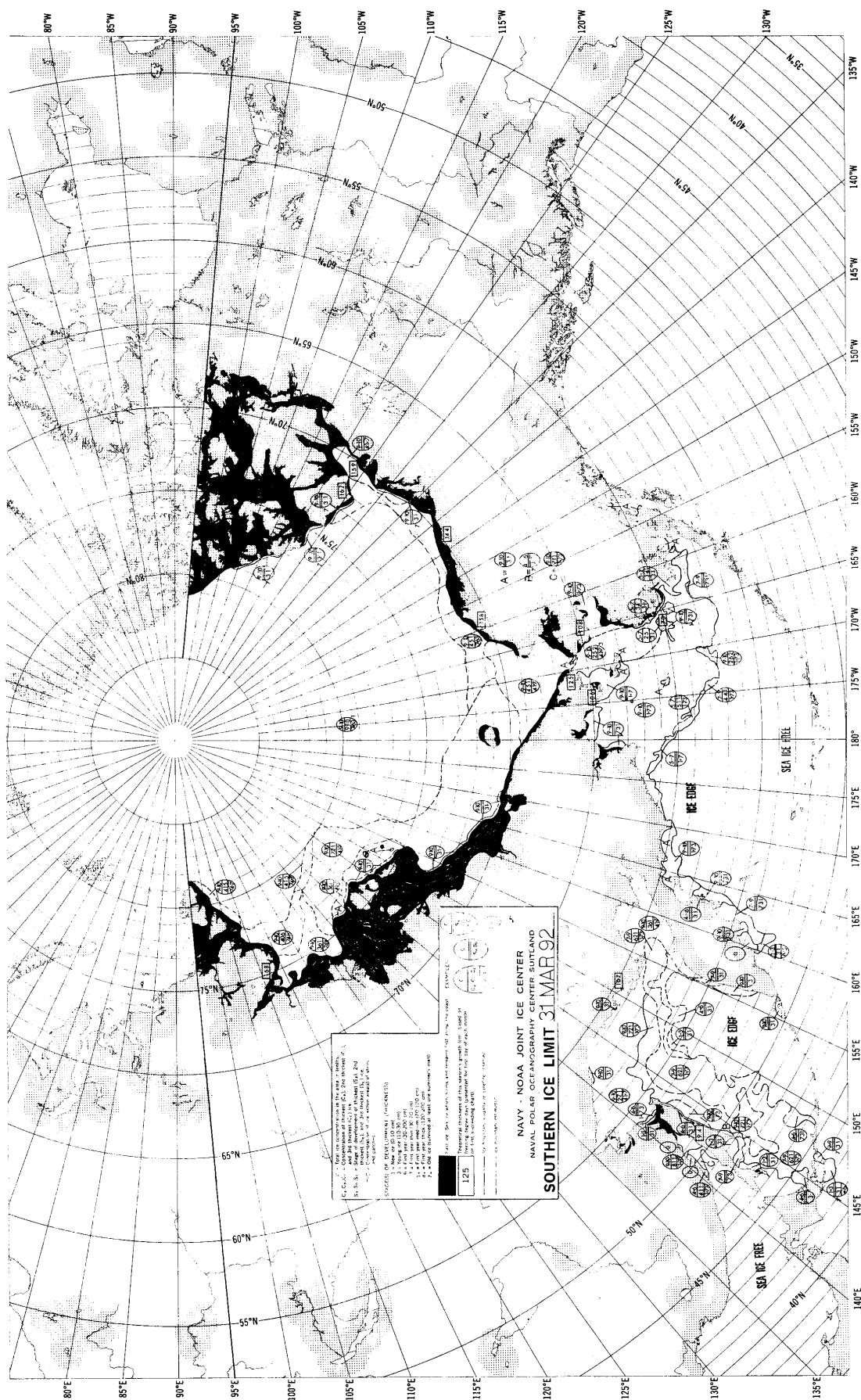


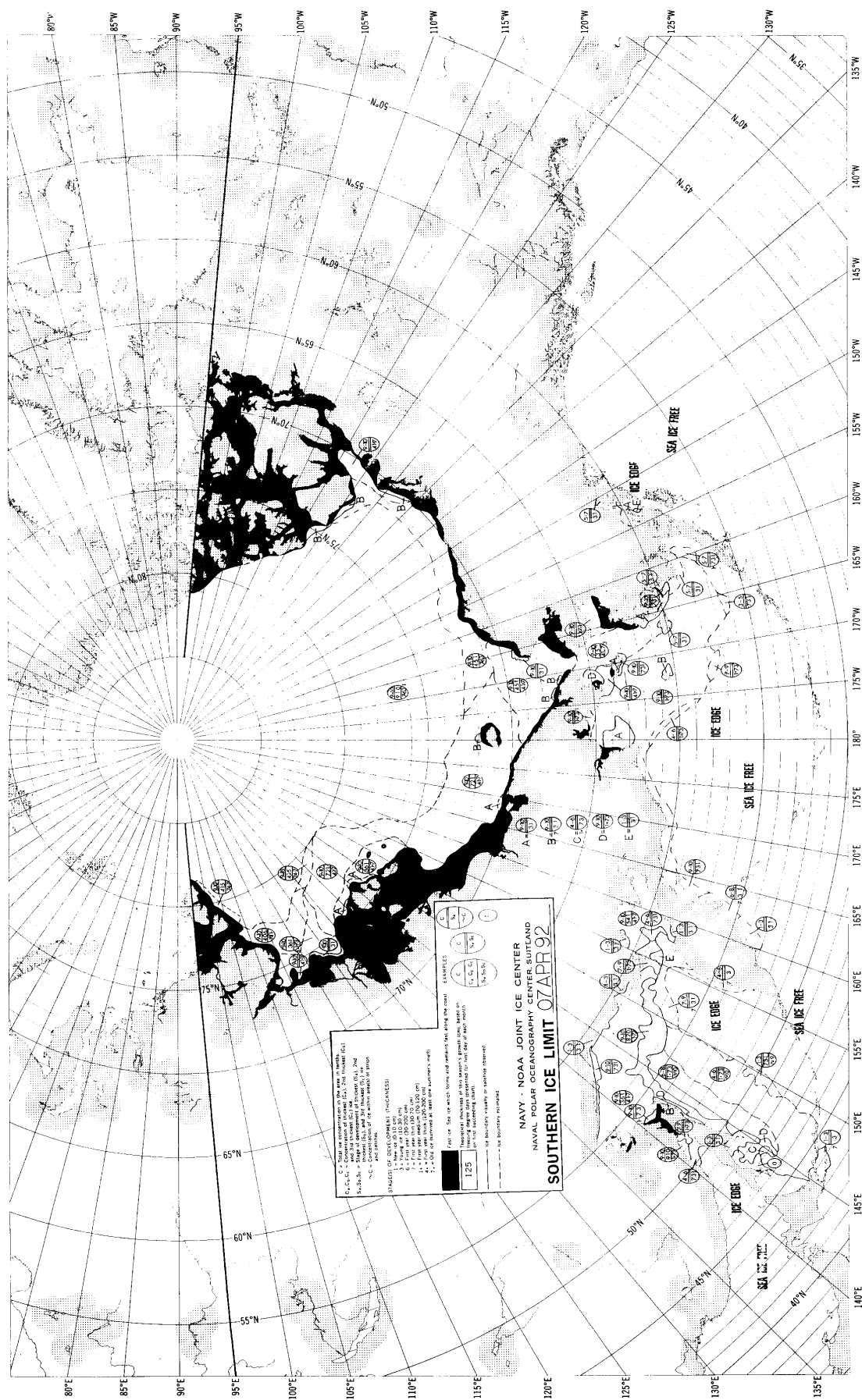


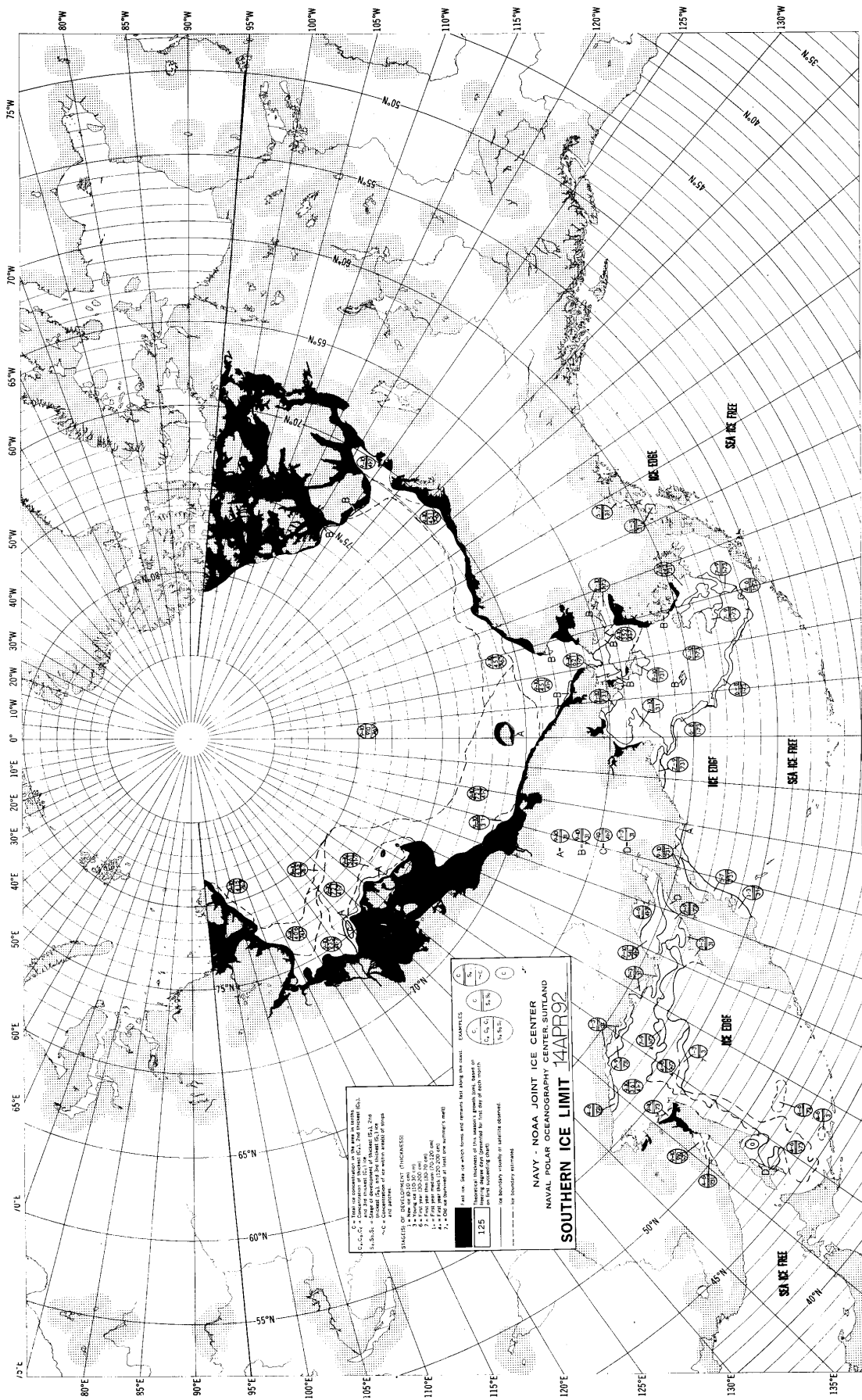


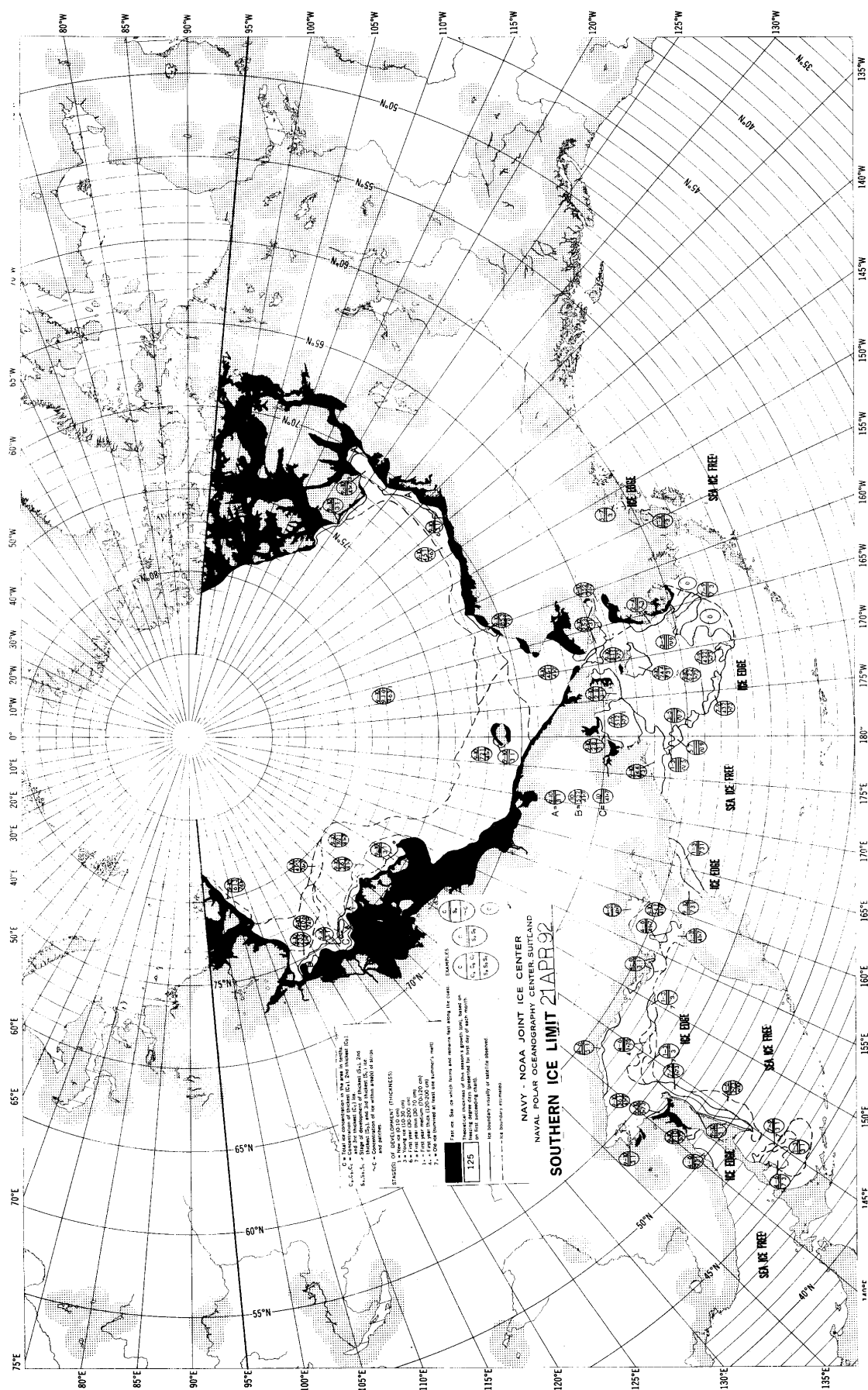


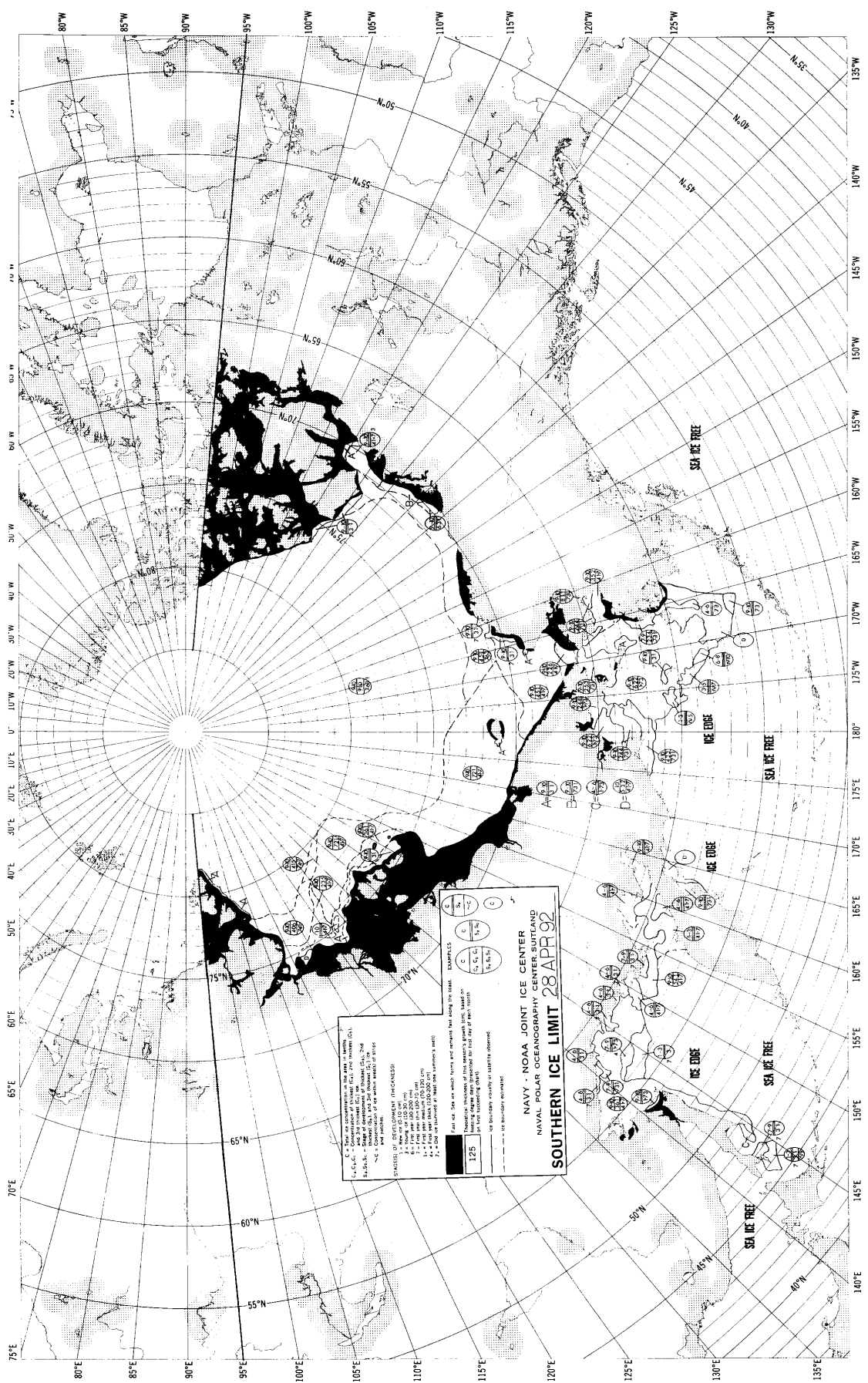


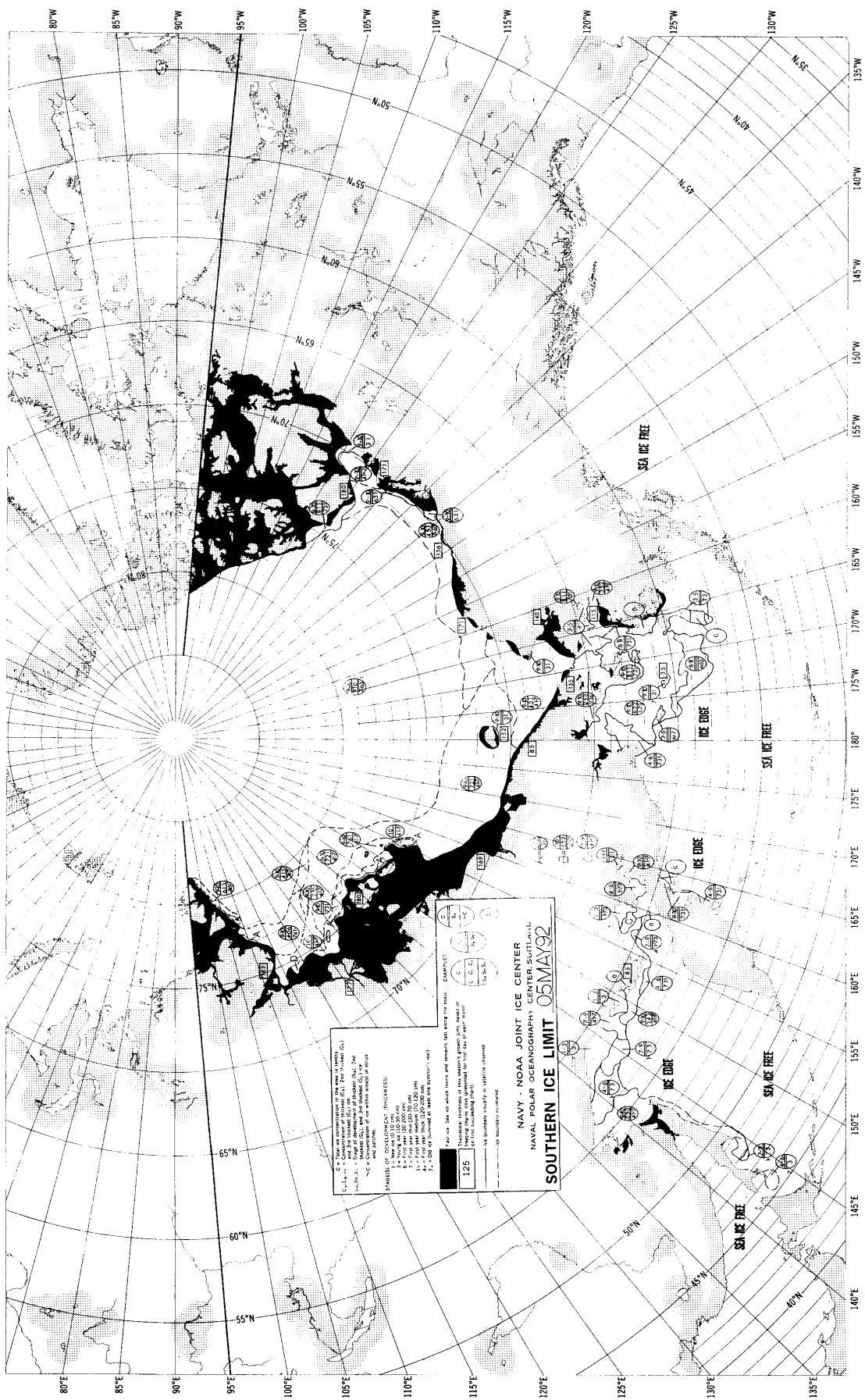


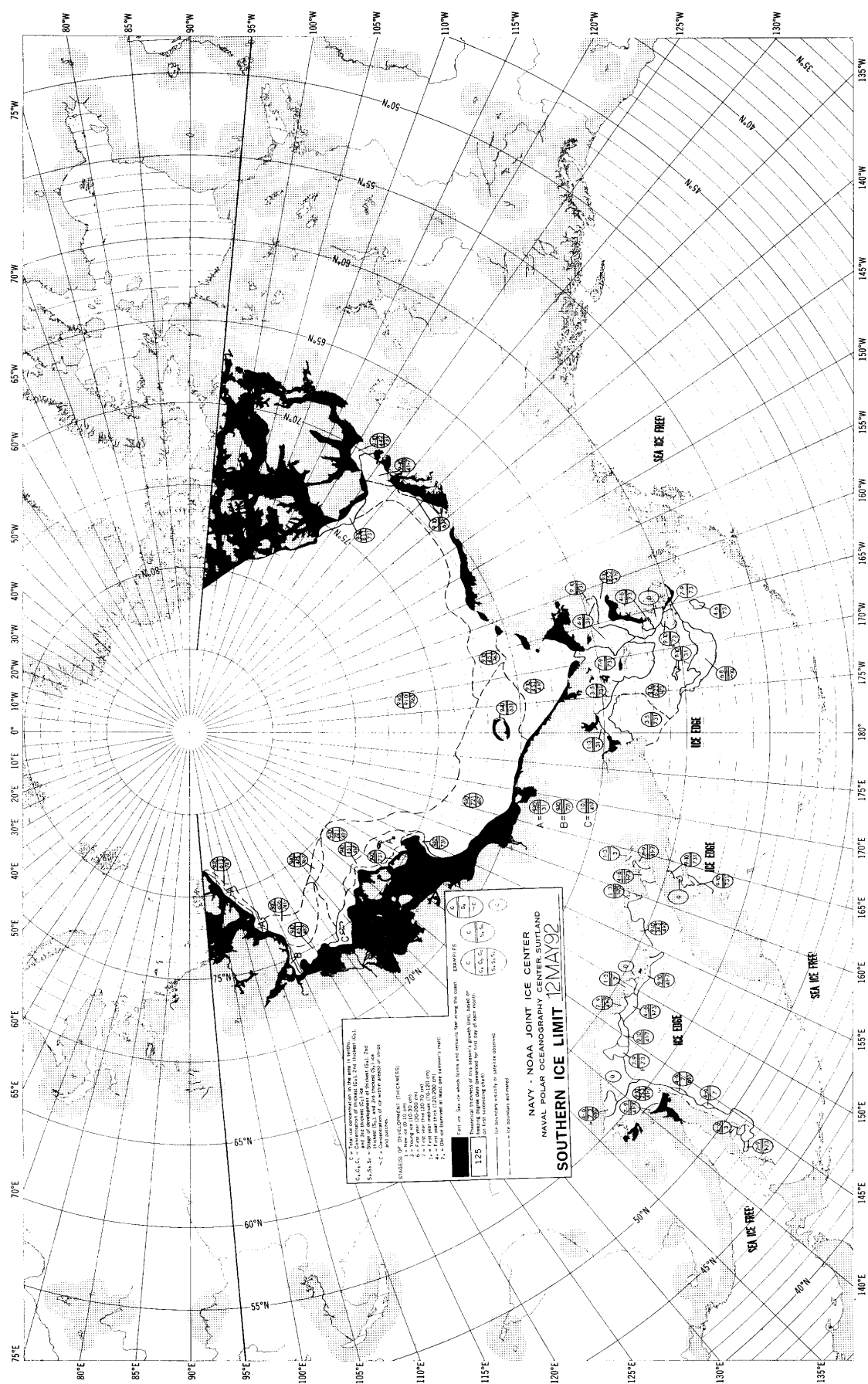


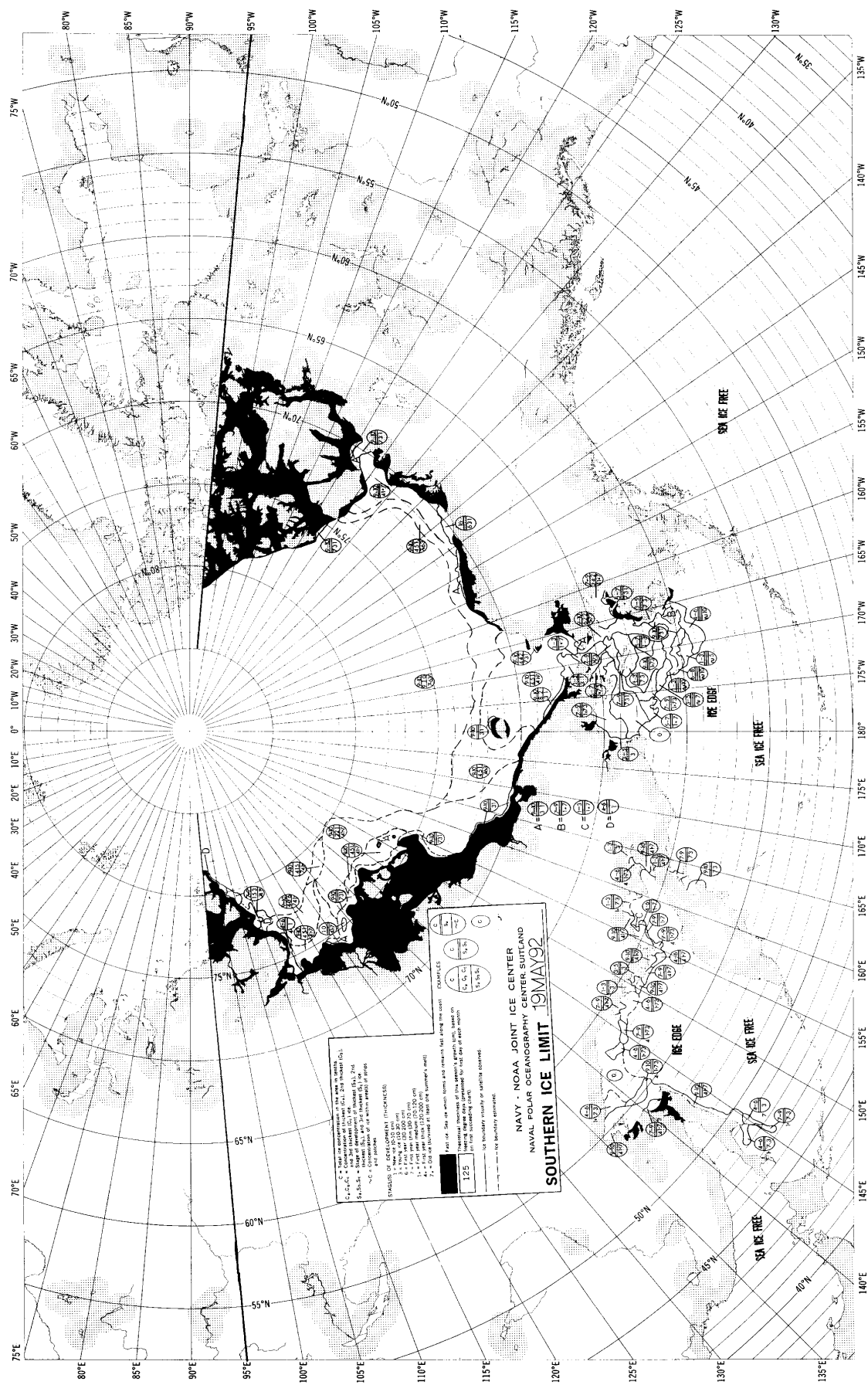


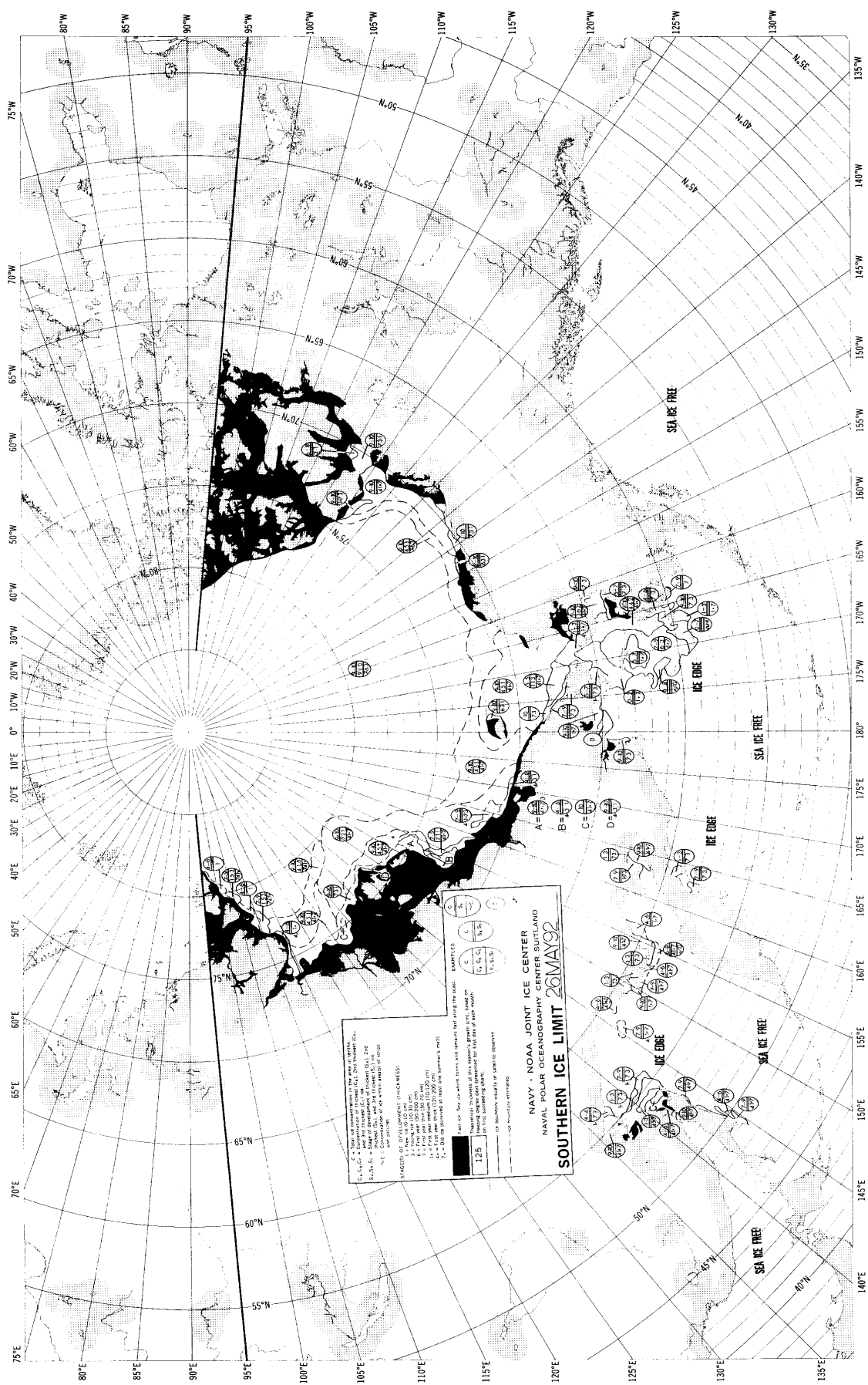


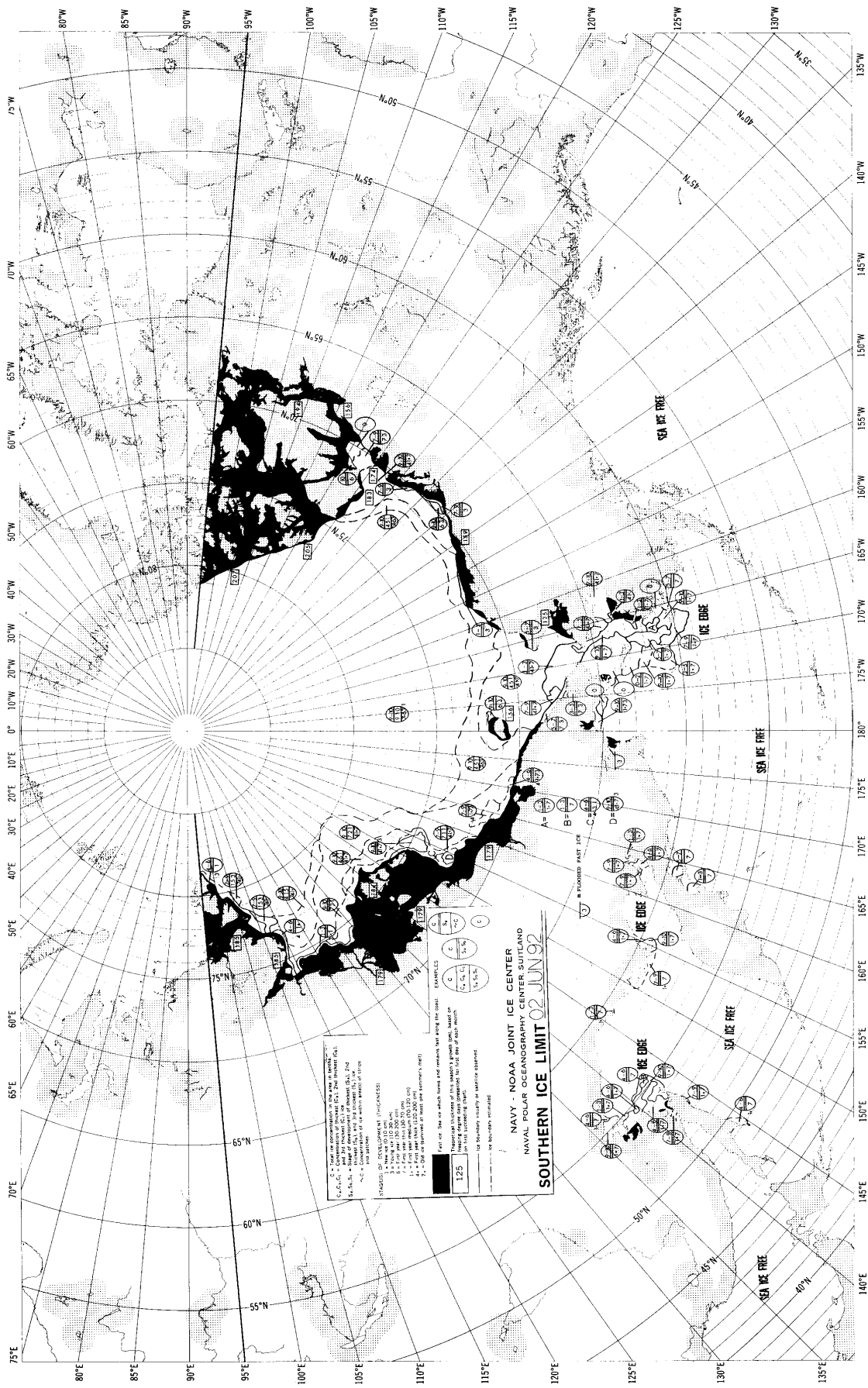


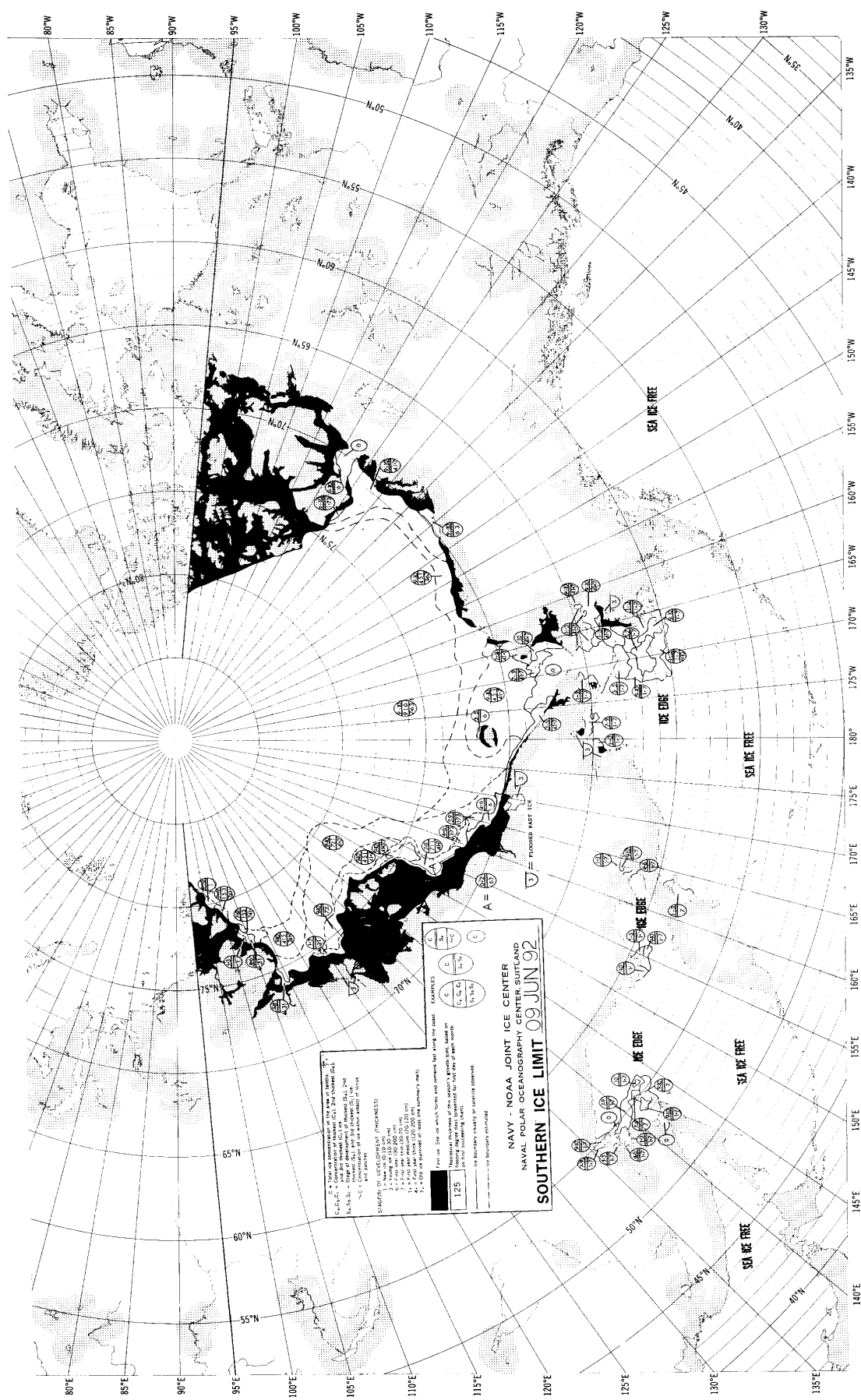


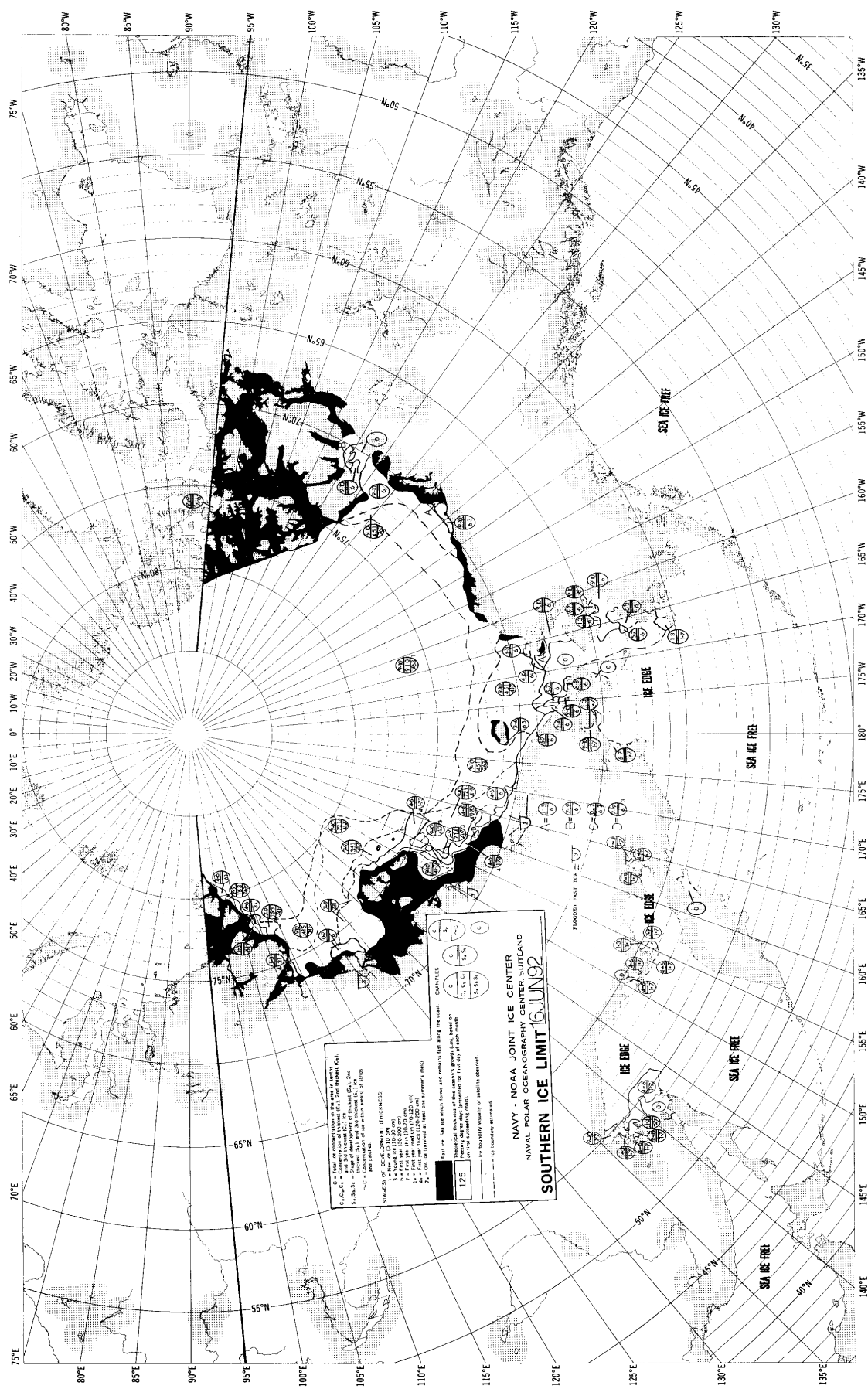


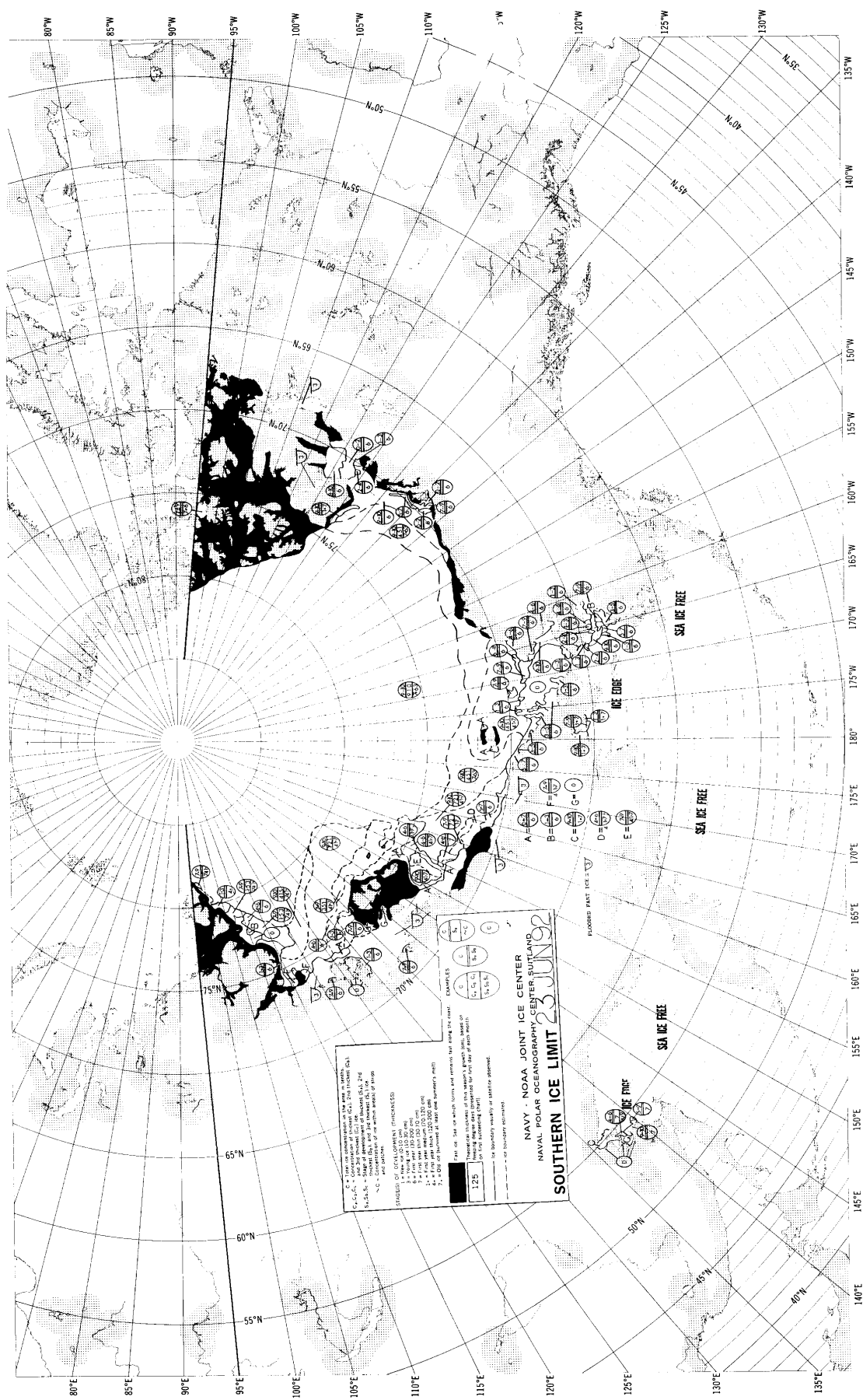


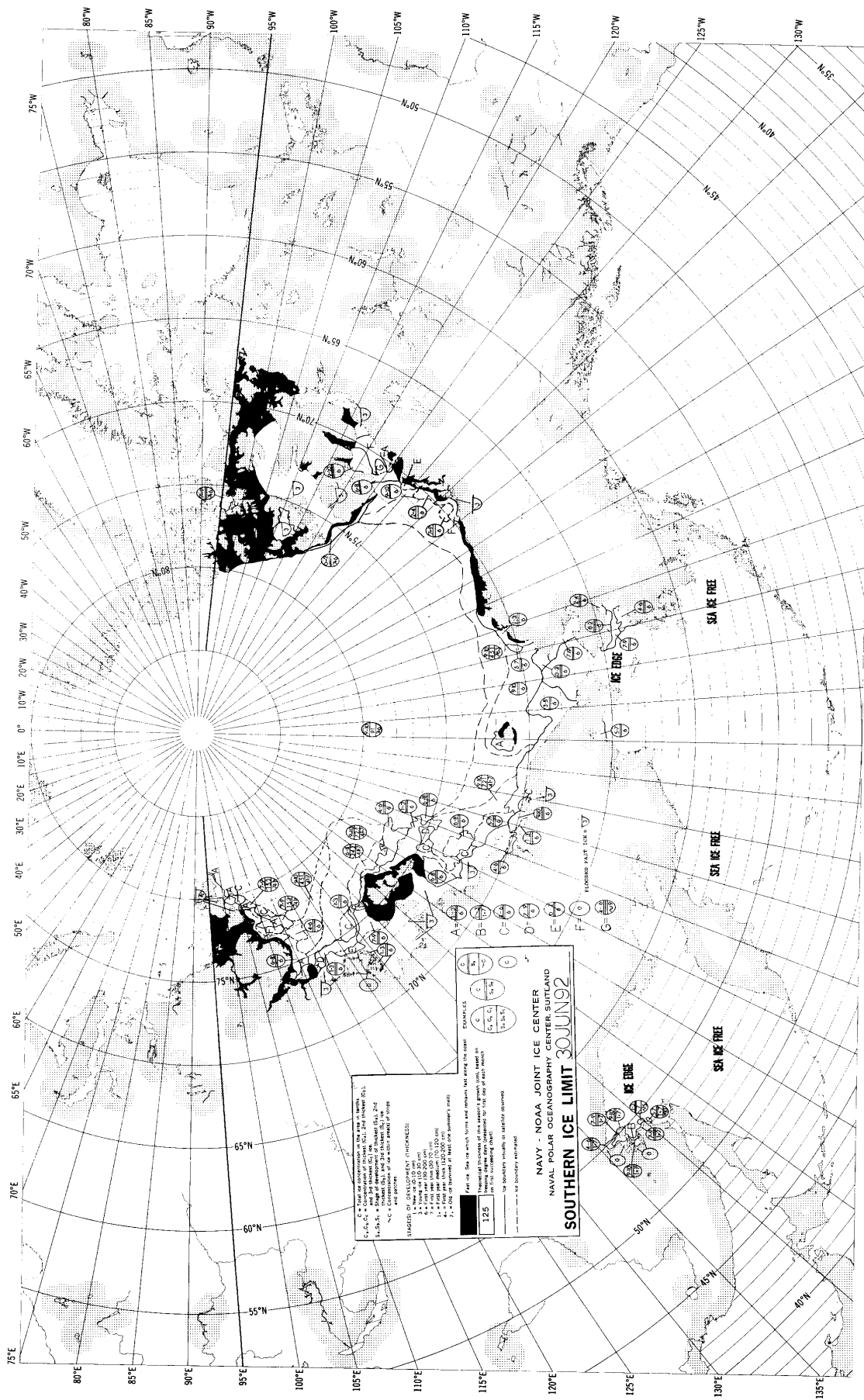


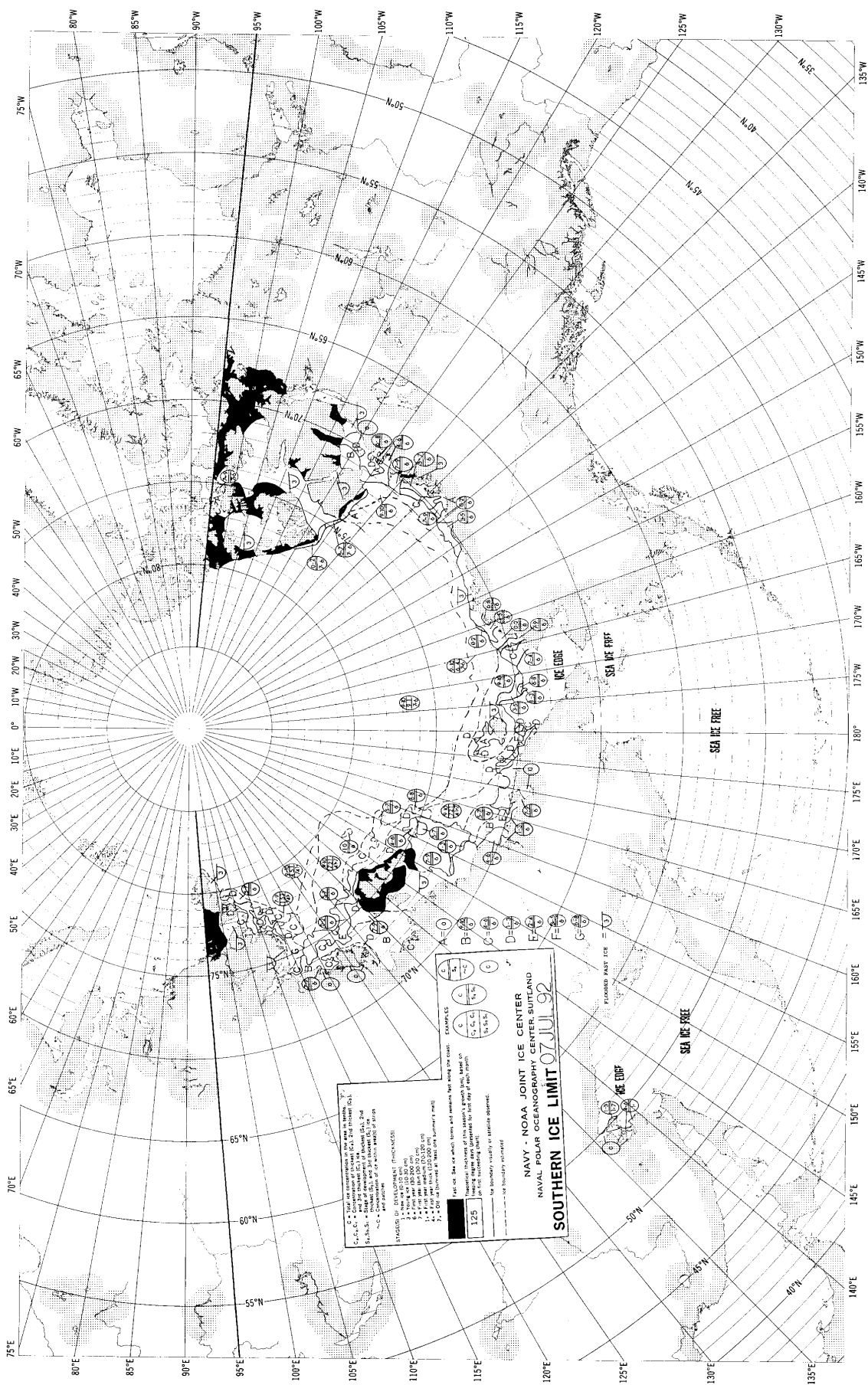


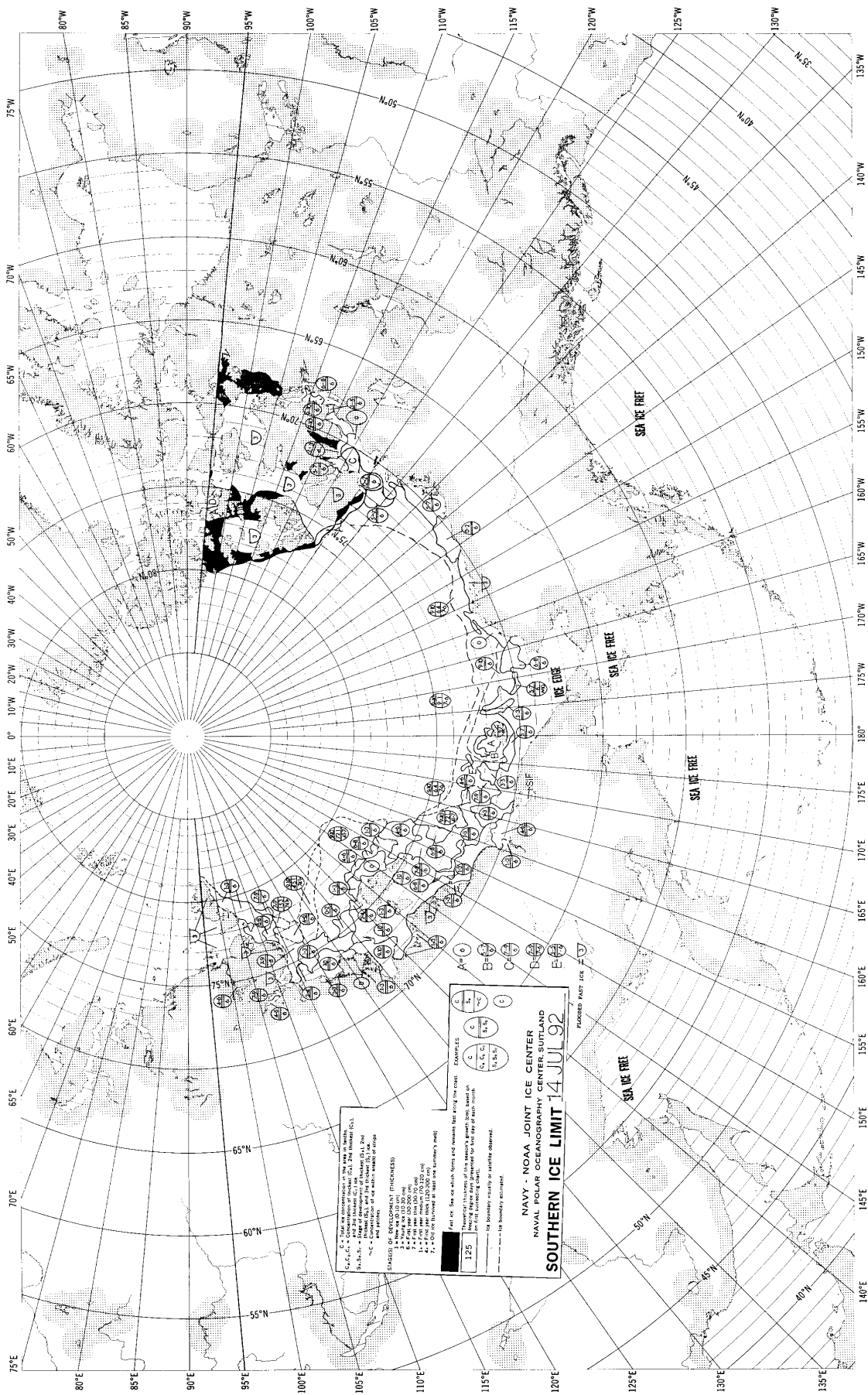


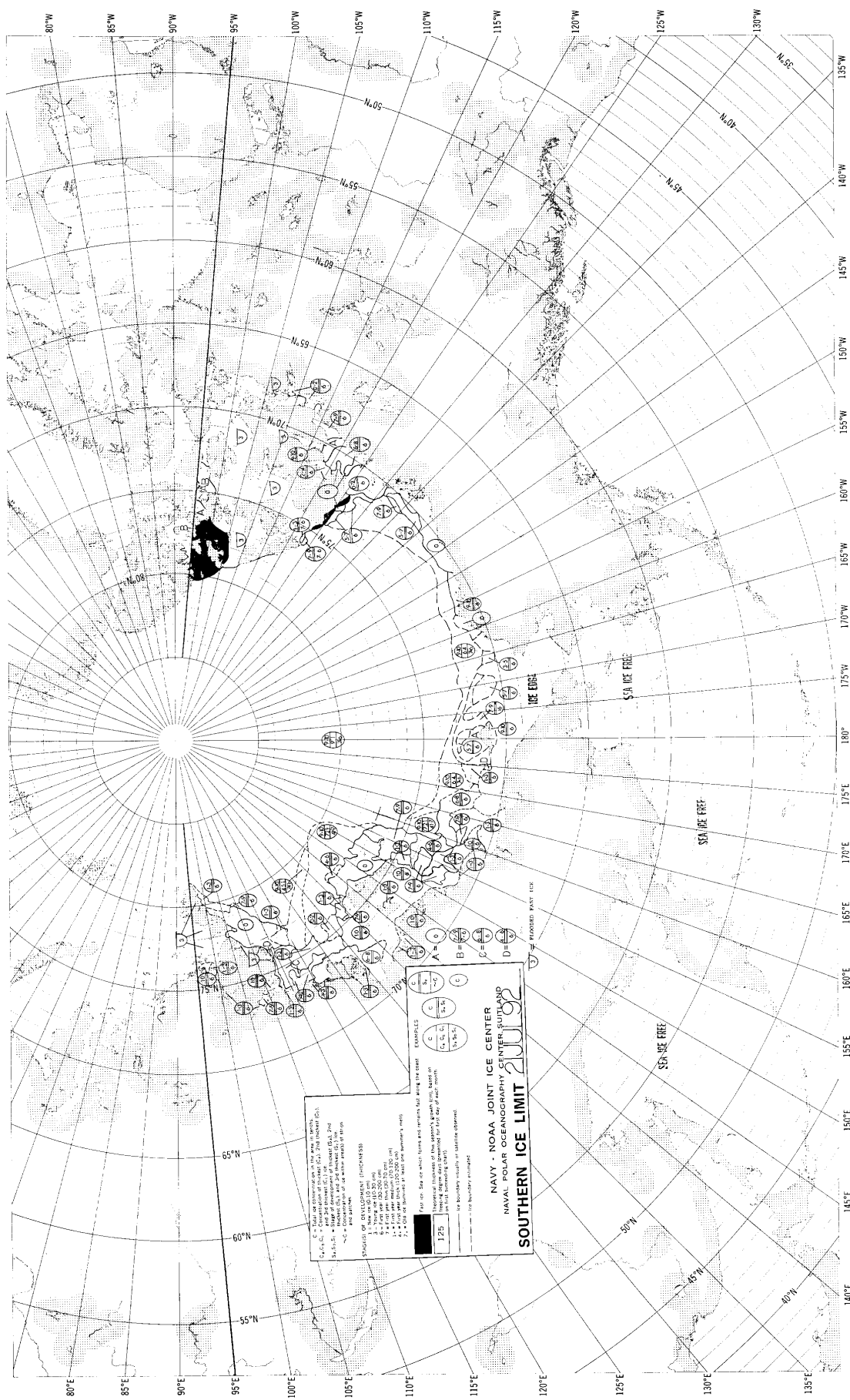


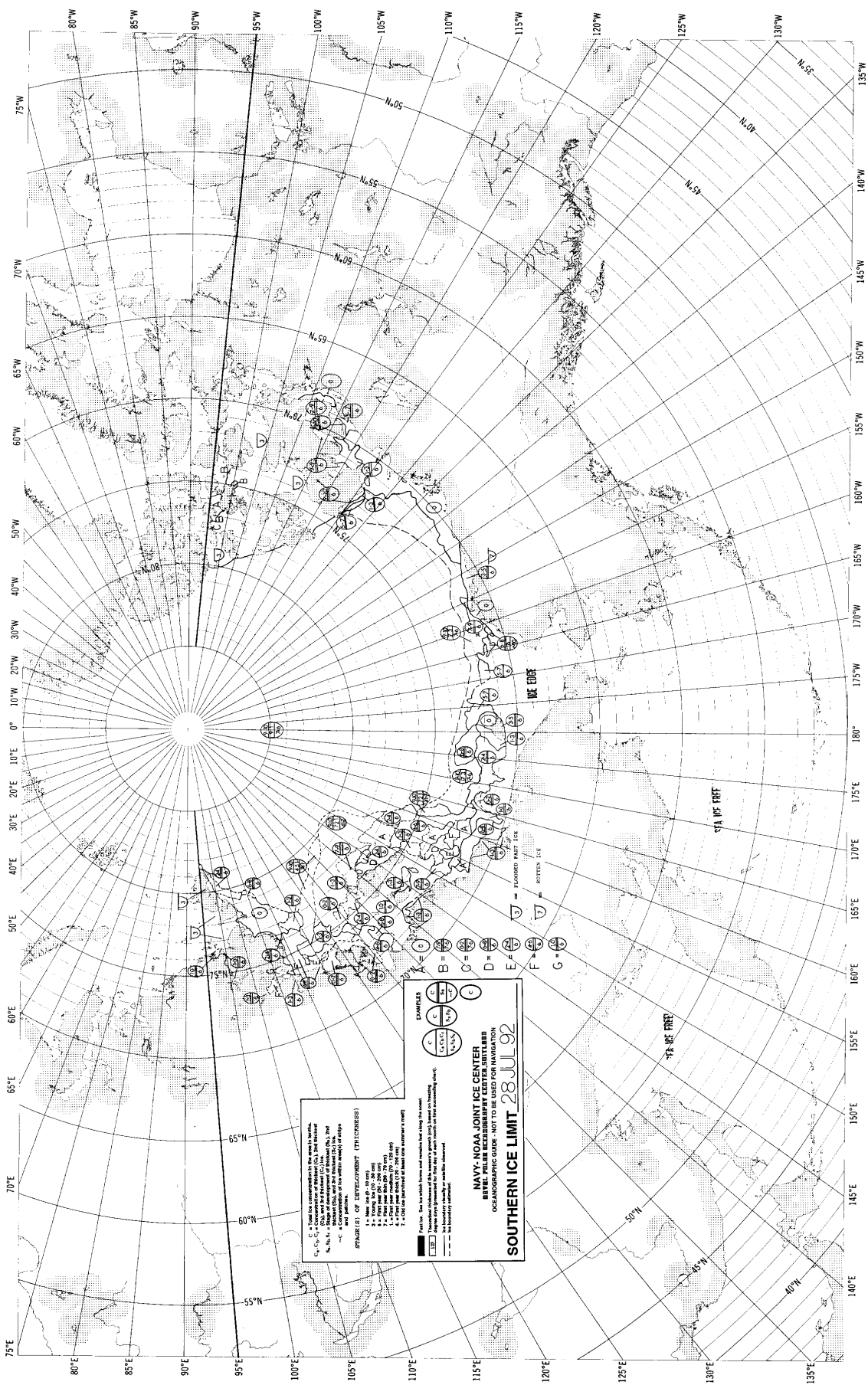


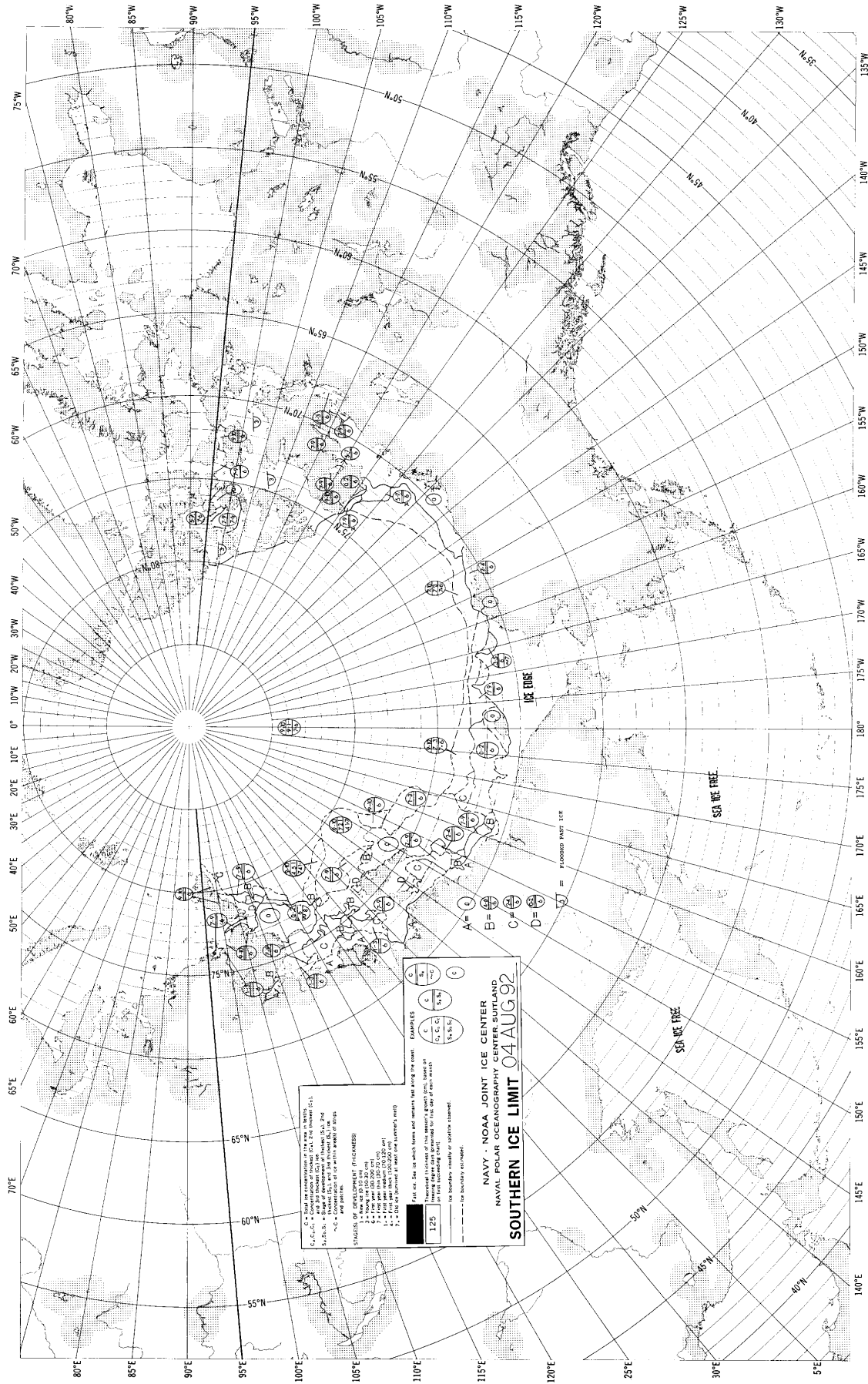












1. Coast line of the Arctic Ocean, including the coast of the Soviet Union, Greenland, and the coast of the United States.

2. Coast line of the Arctic Ocean, including the coast of the Soviet Union, Greenland, and the coast of the United States.

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8. Coast line of the Arctic Ocean, including the coast of the Soviet Union, Greenland, and the coast of the United States.

9. Coast line of the Arctic Ocean, including the coast of the Soviet Union, Greenland, and the coast of the United States.

10. Coast line of the Arctic Ocean, including the coast of the Soviet Union, Greenland, and the coast of the United States.

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SOUTHERN ICE LIMIT 04 AUG 92

1. Coast line of the Arctic Ocean, including the coast of the Soviet Union, Greenland, and the coast of the United States.

2. Coast line of the Arctic Ocean, including the coast of the Soviet Union, Greenland, and the coast of the United States.

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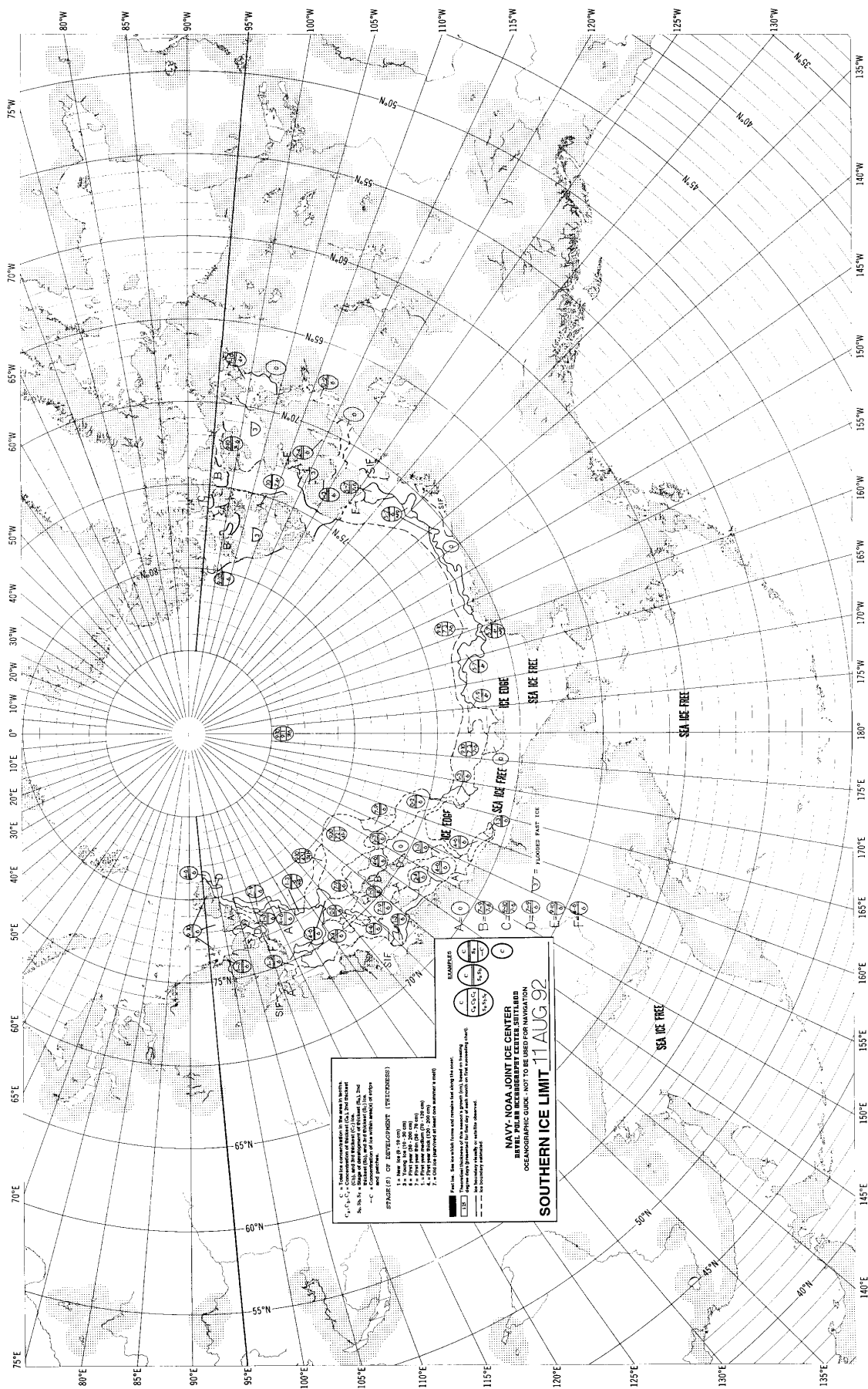
6. Coast line of the Arctic Ocean, including the coast of the Soviet Union, Greenland, and the coast of the United States.

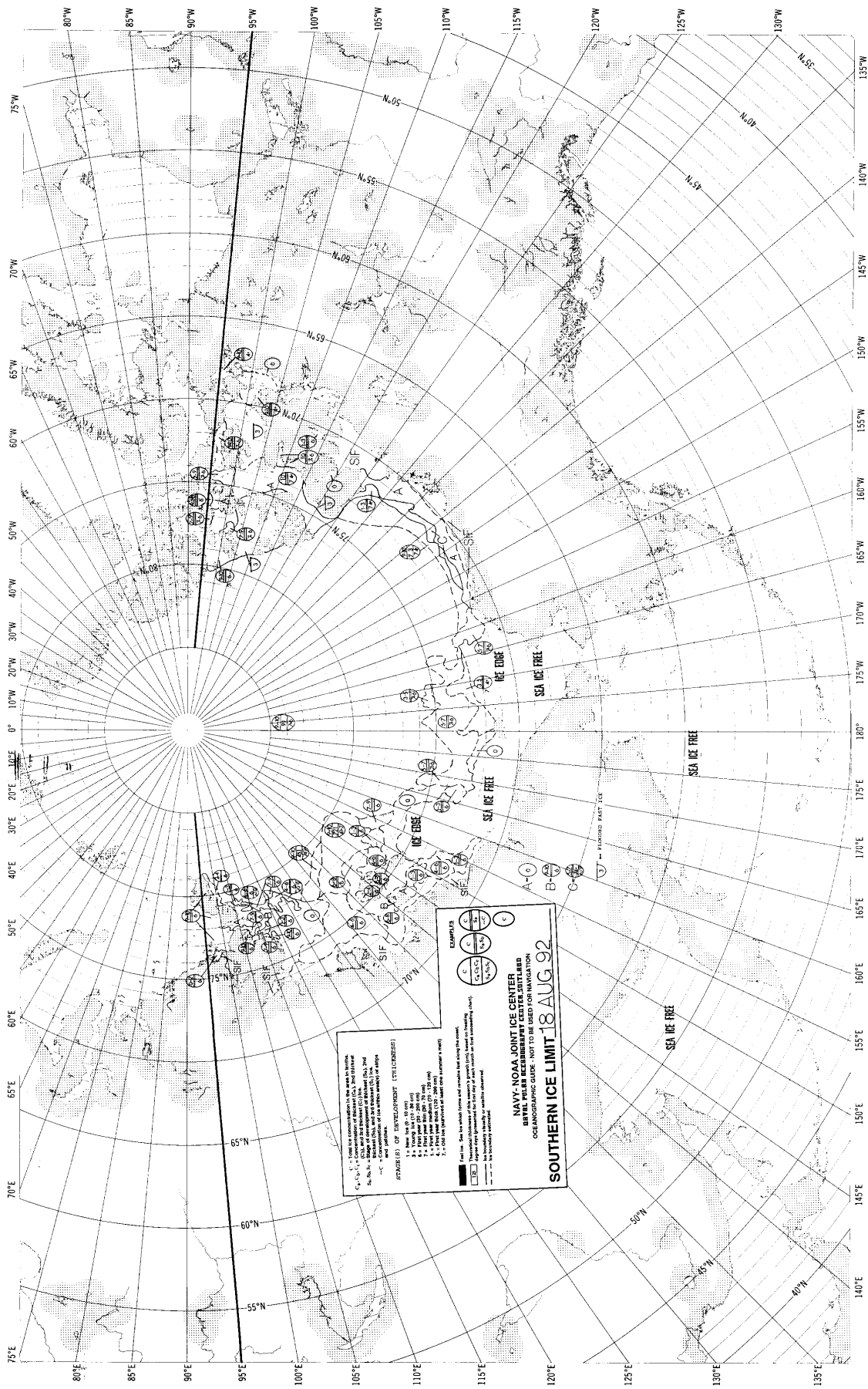
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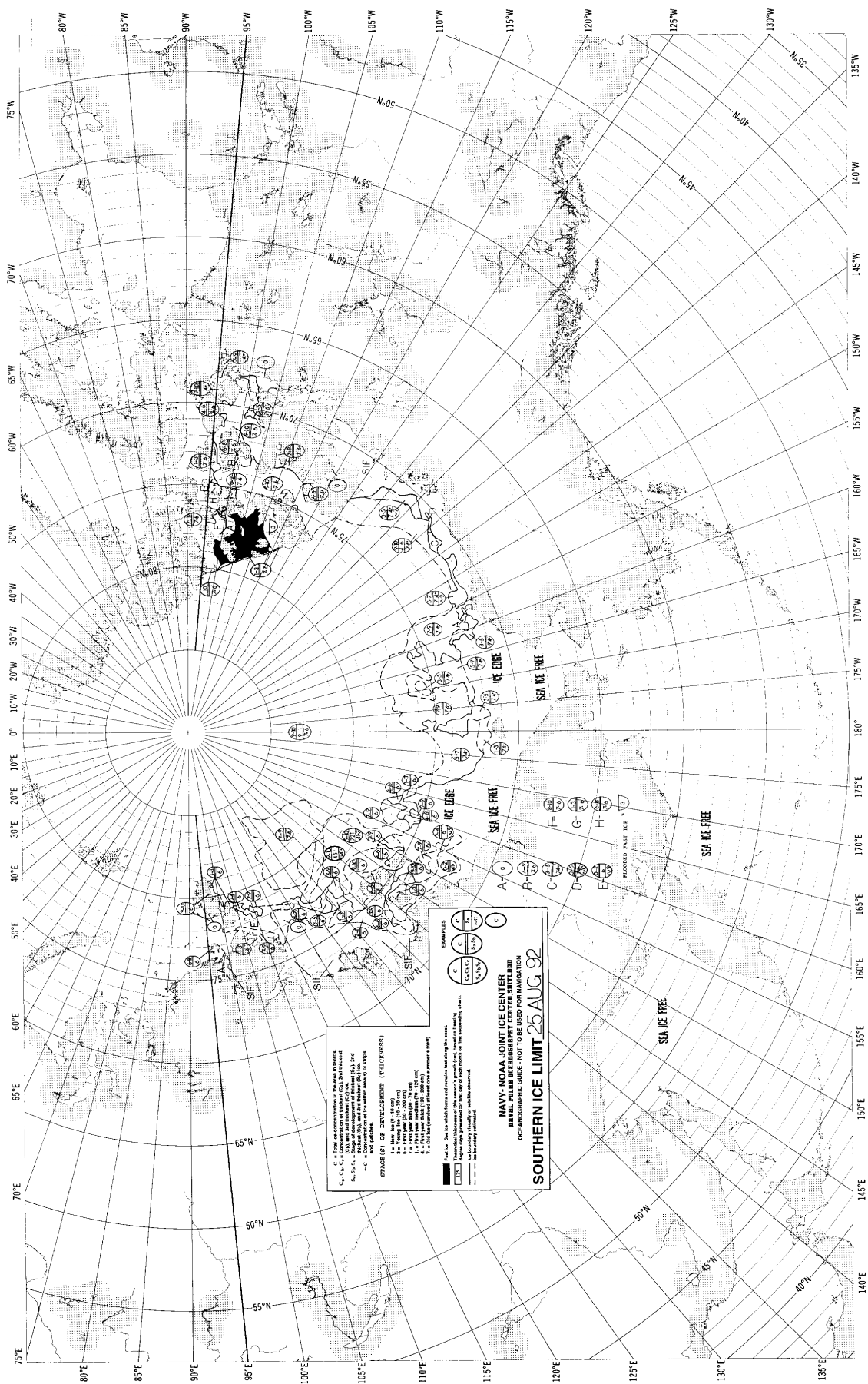
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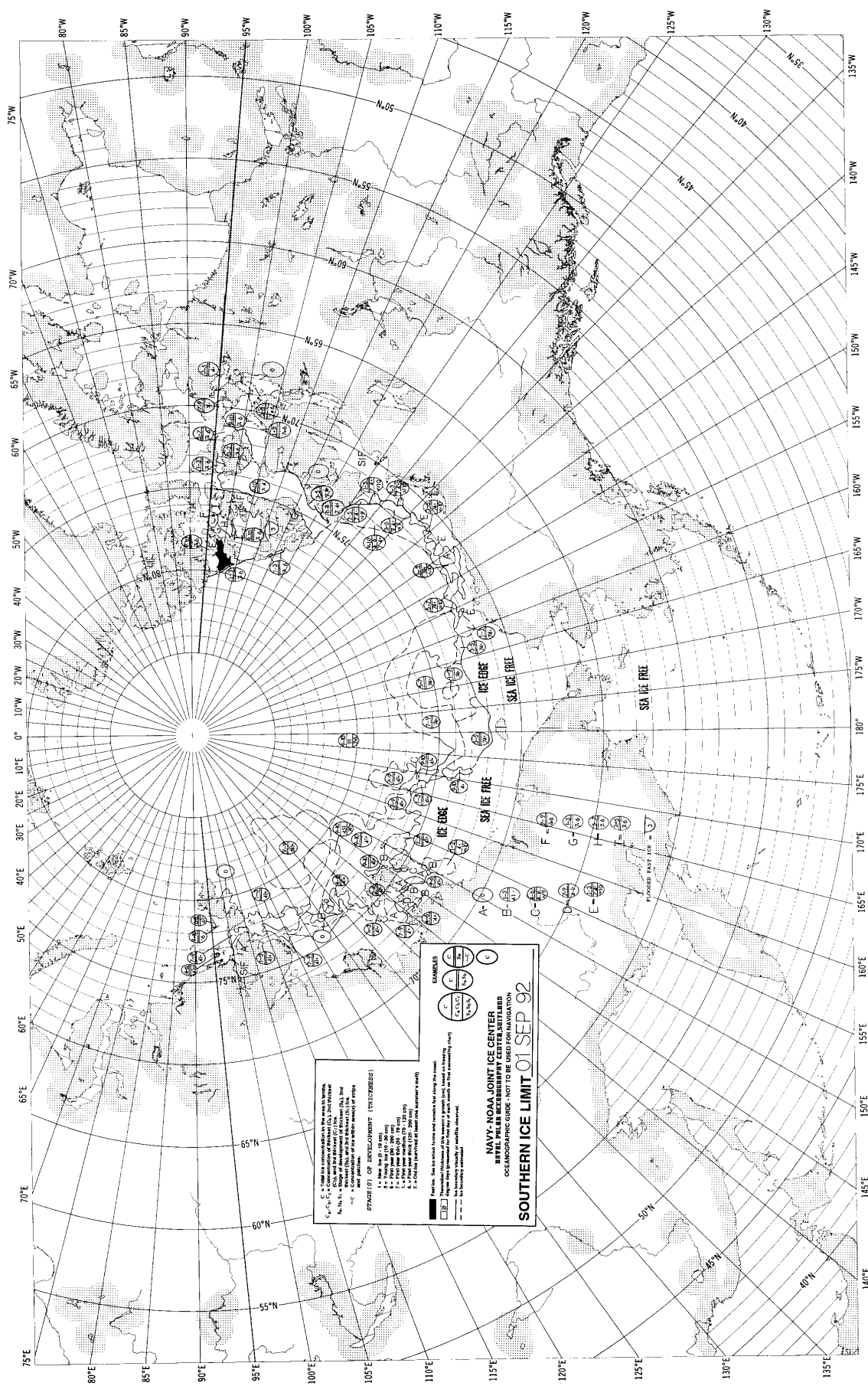
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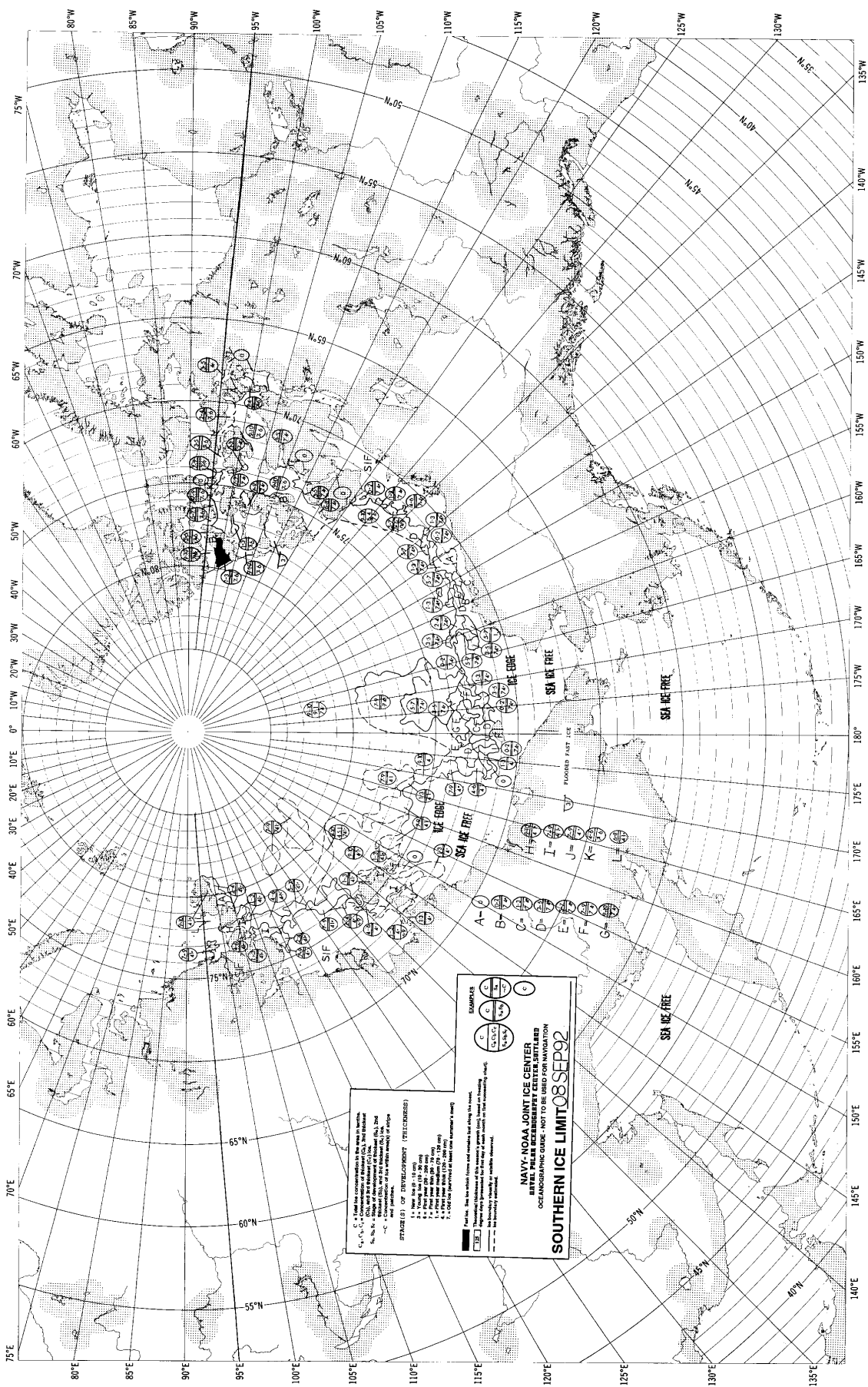
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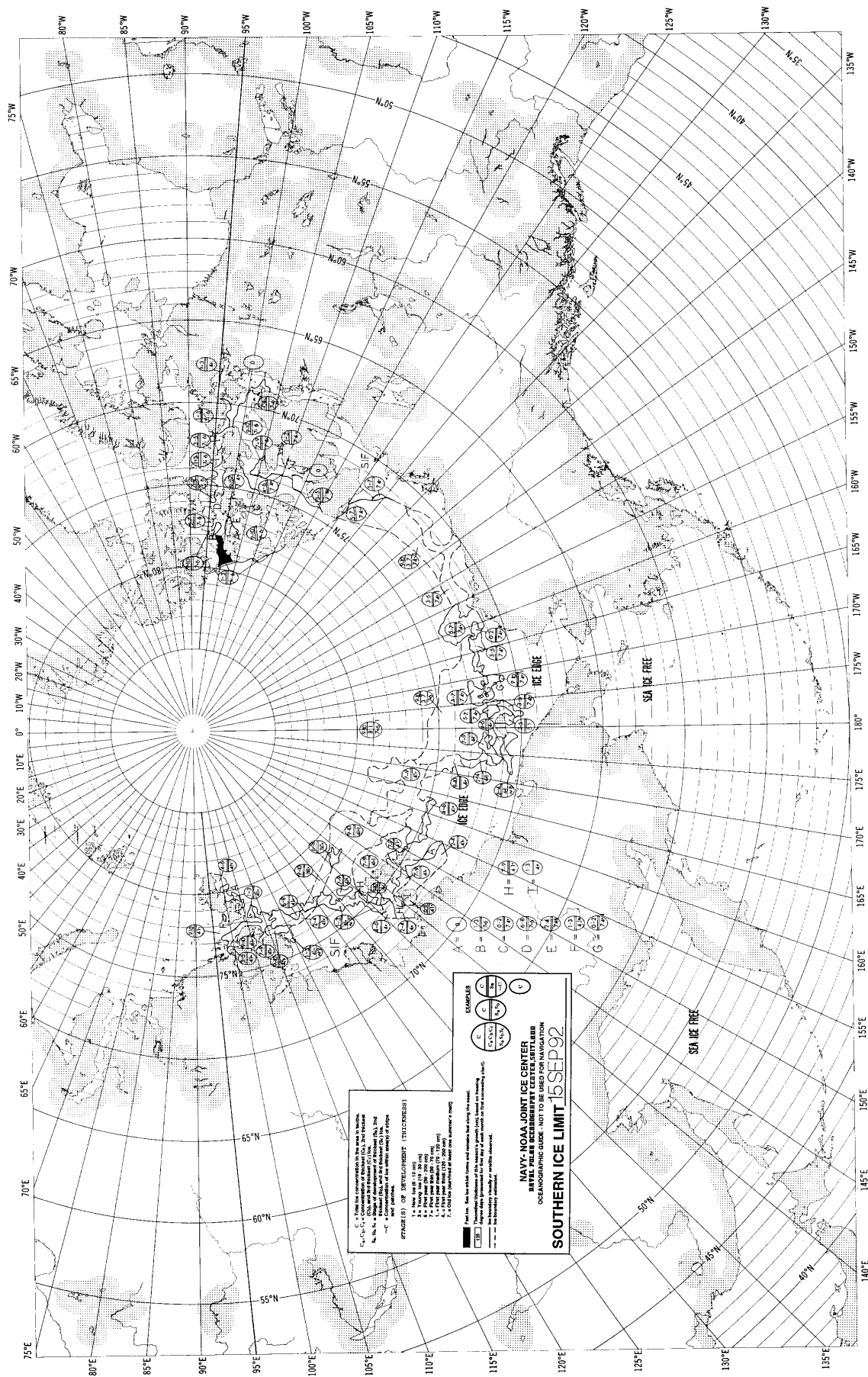


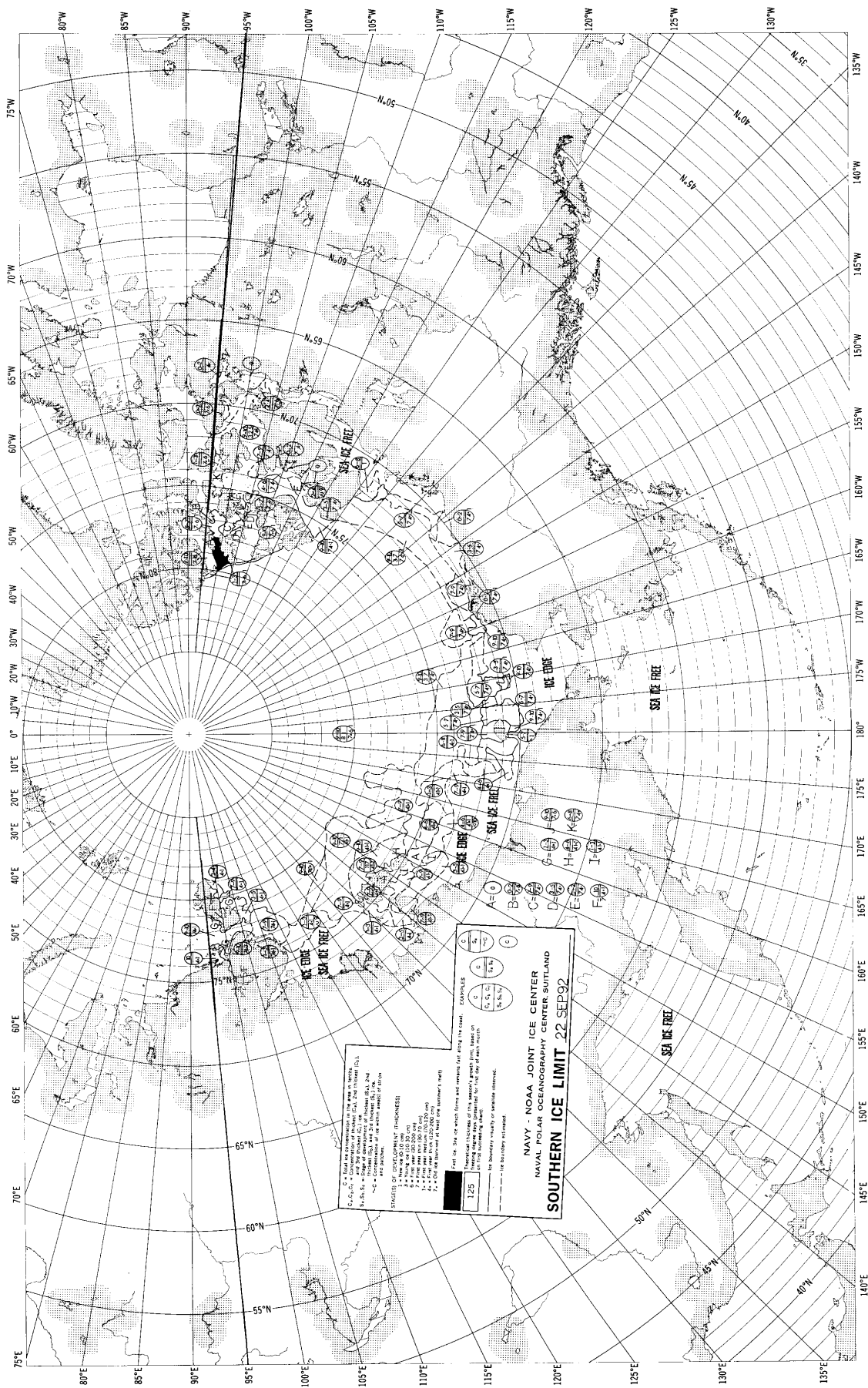


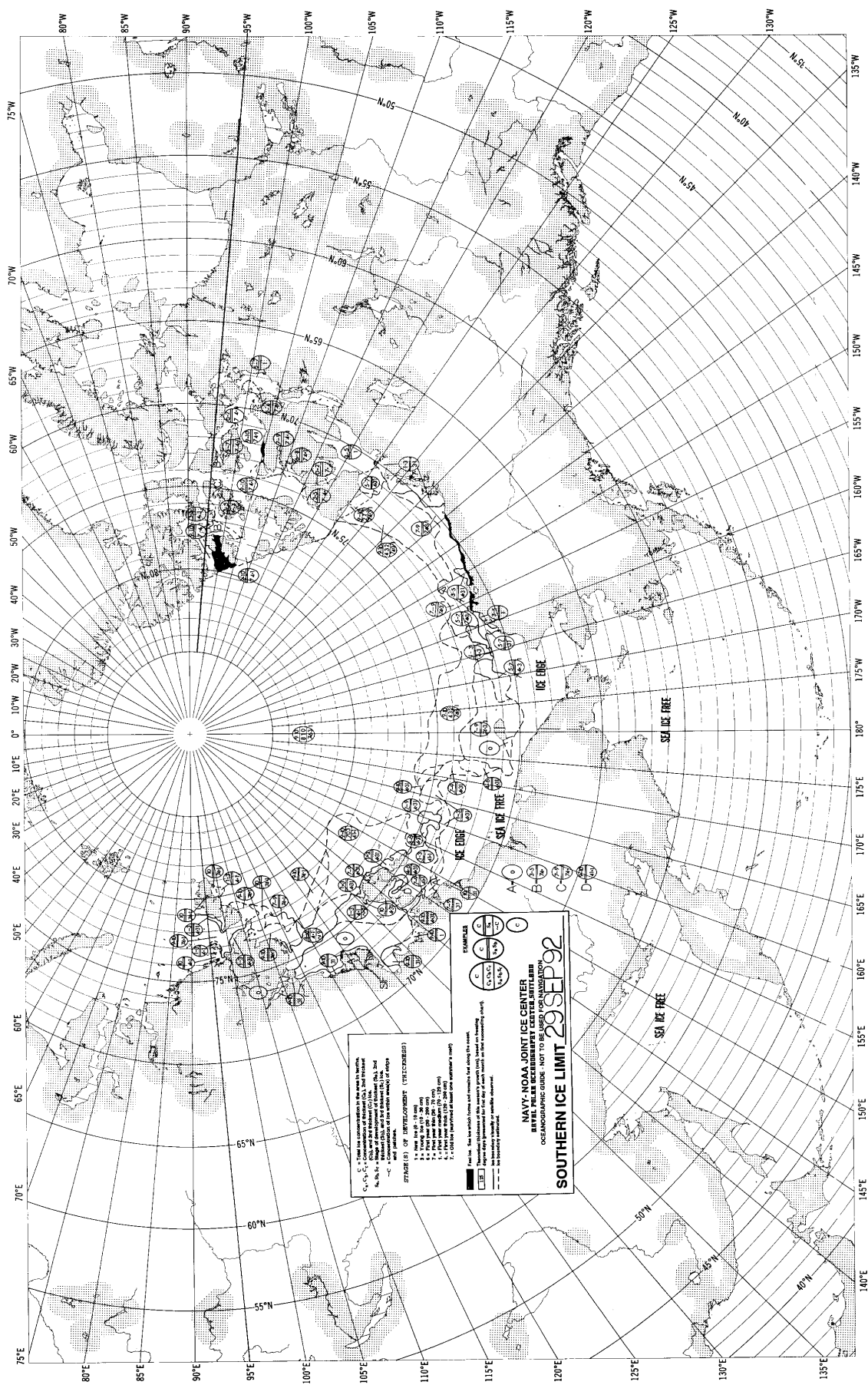


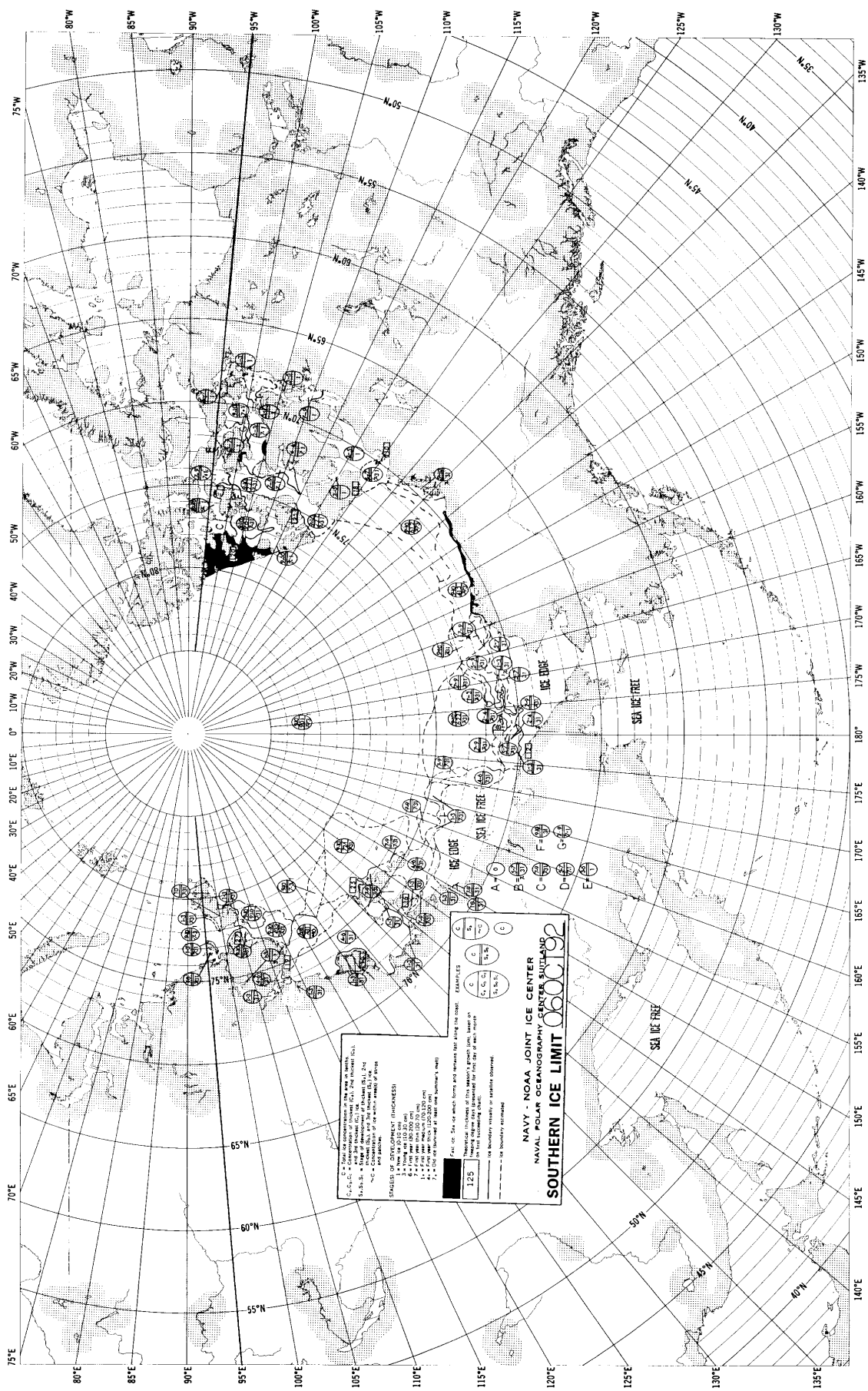


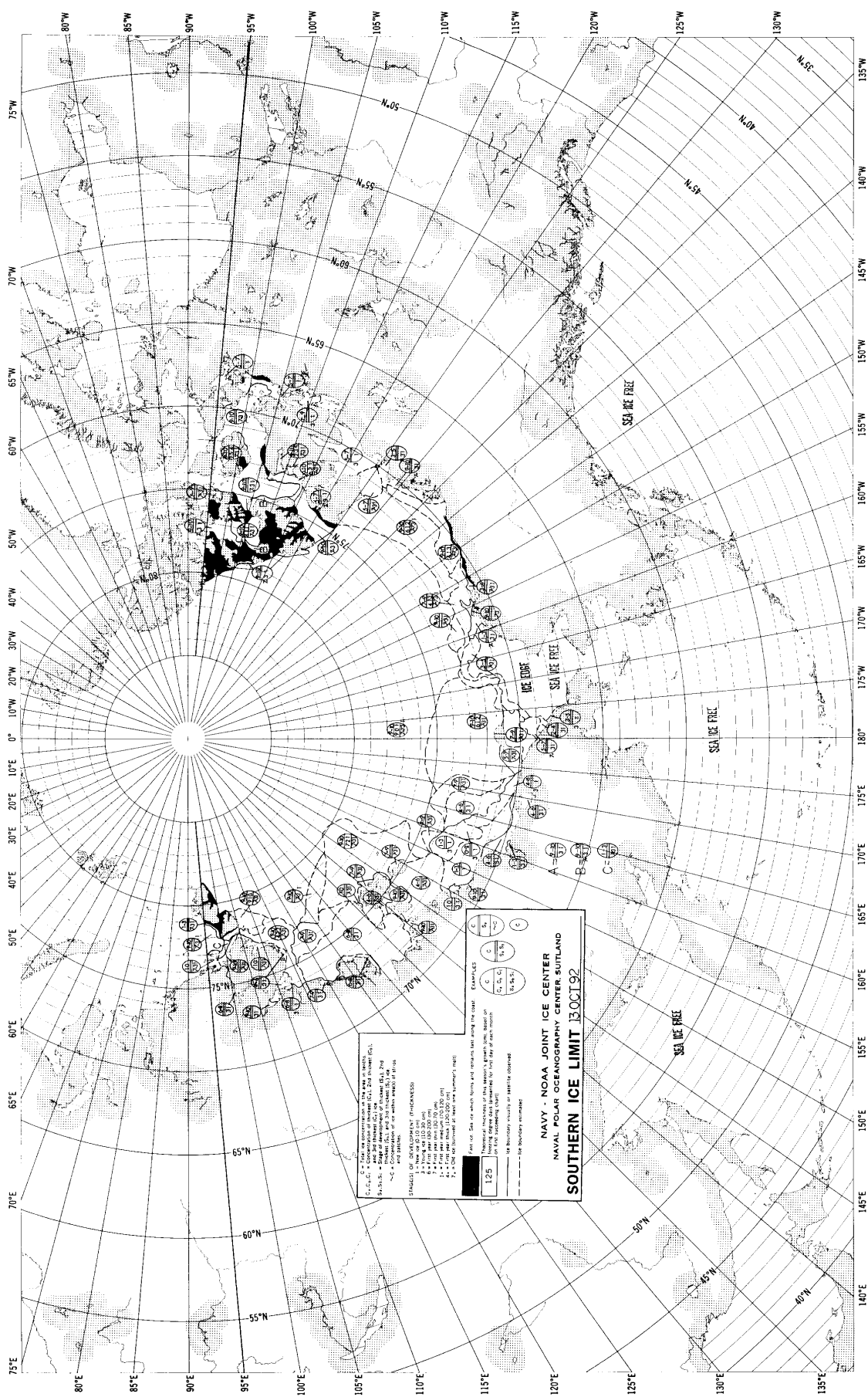


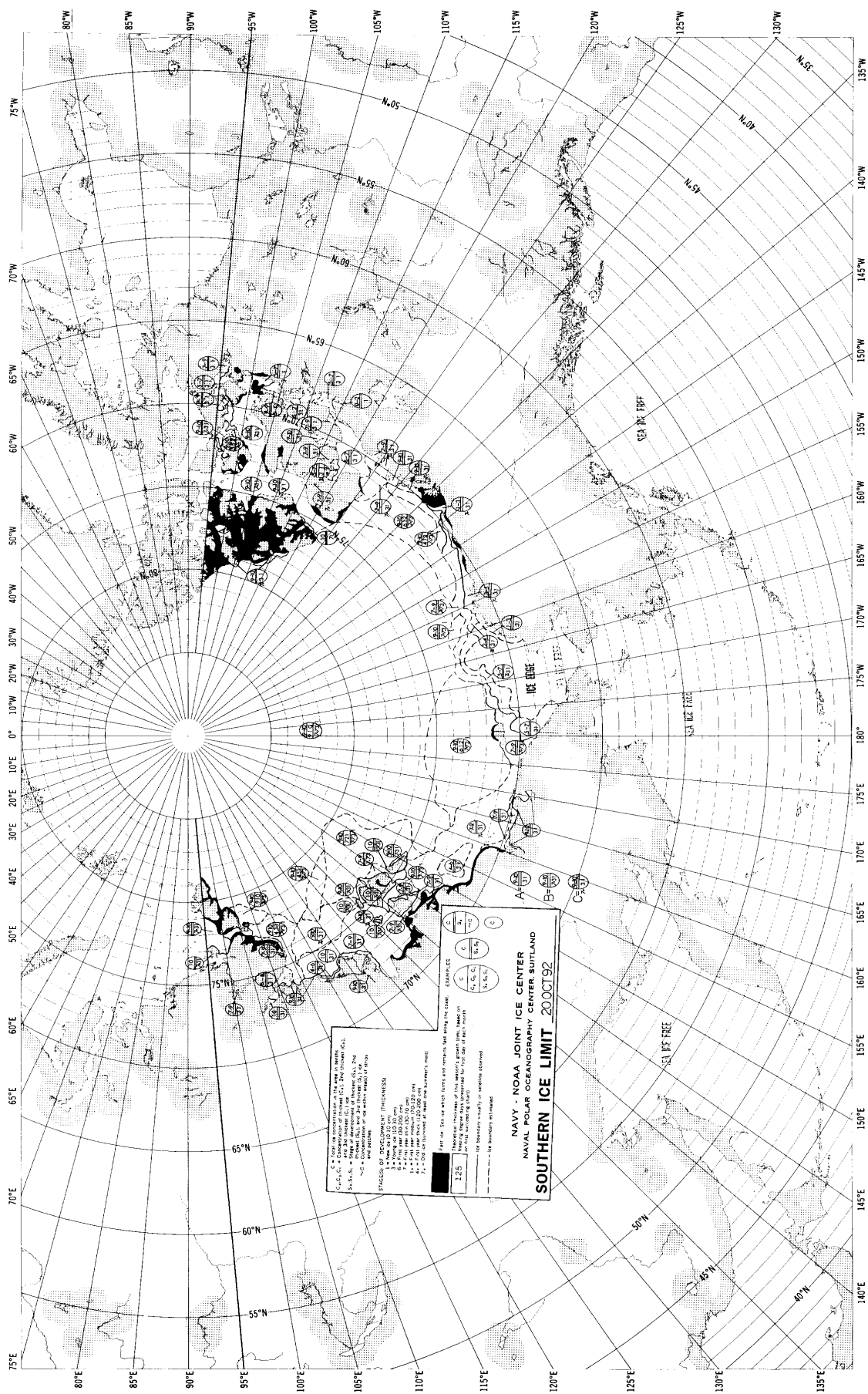


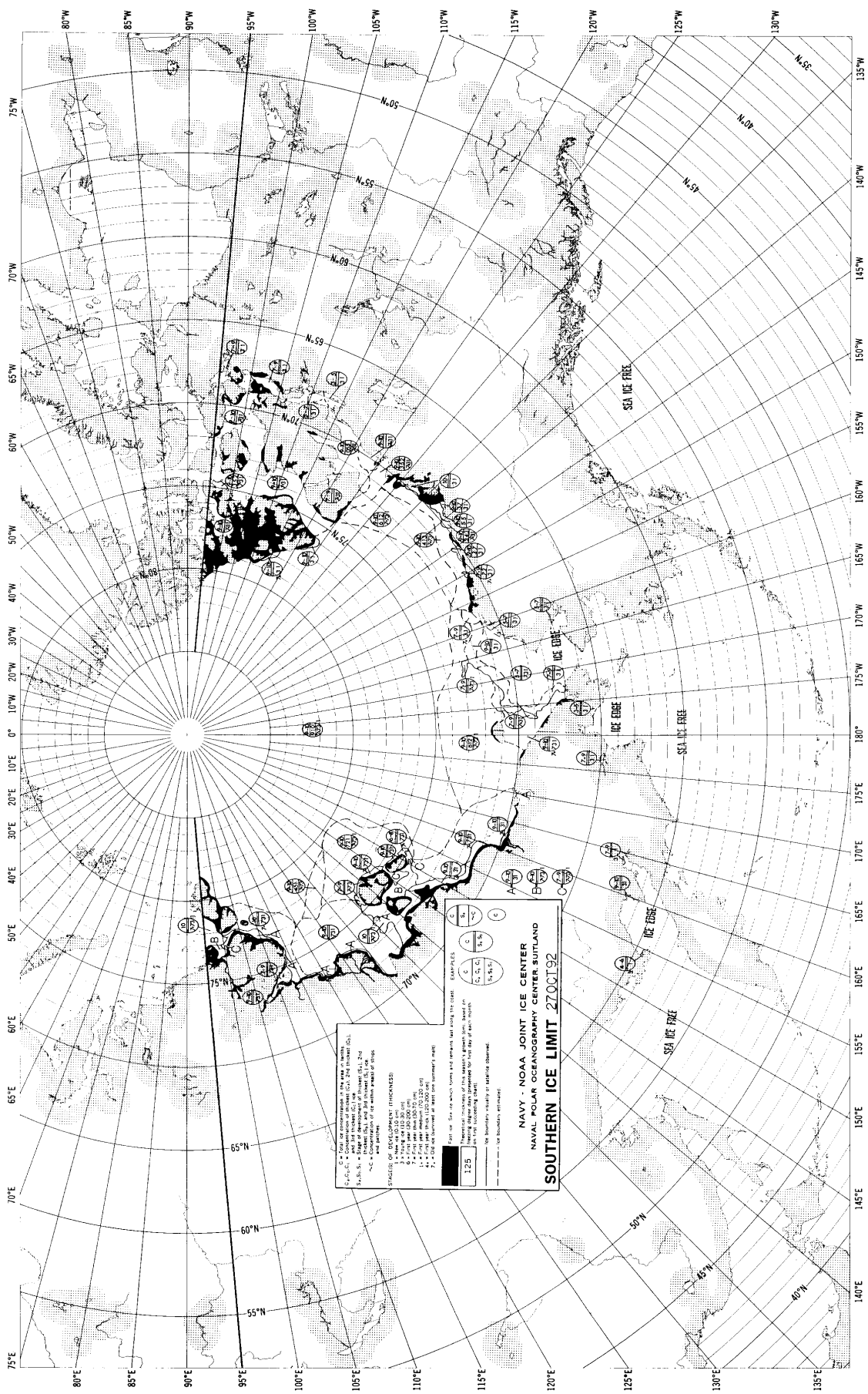


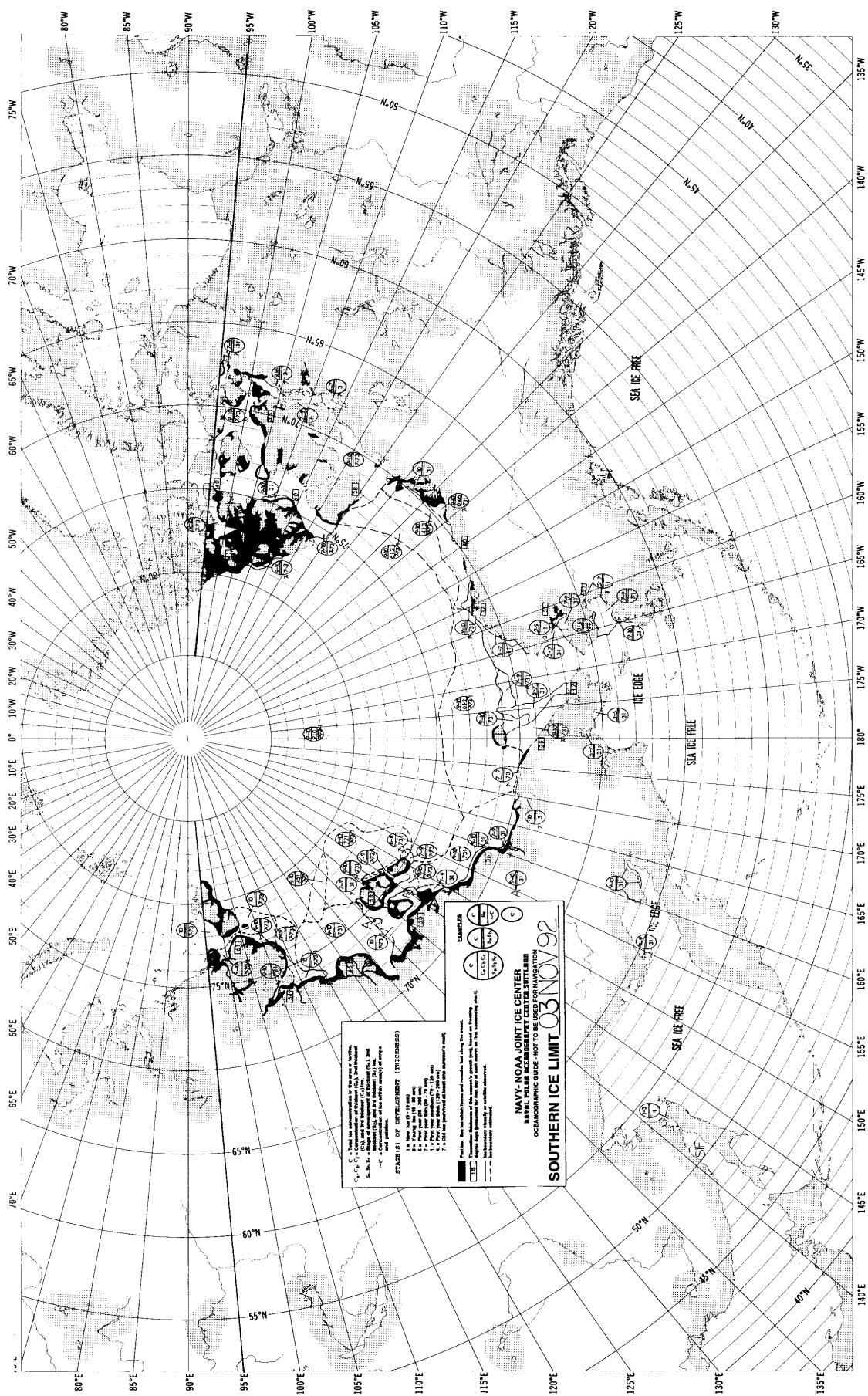


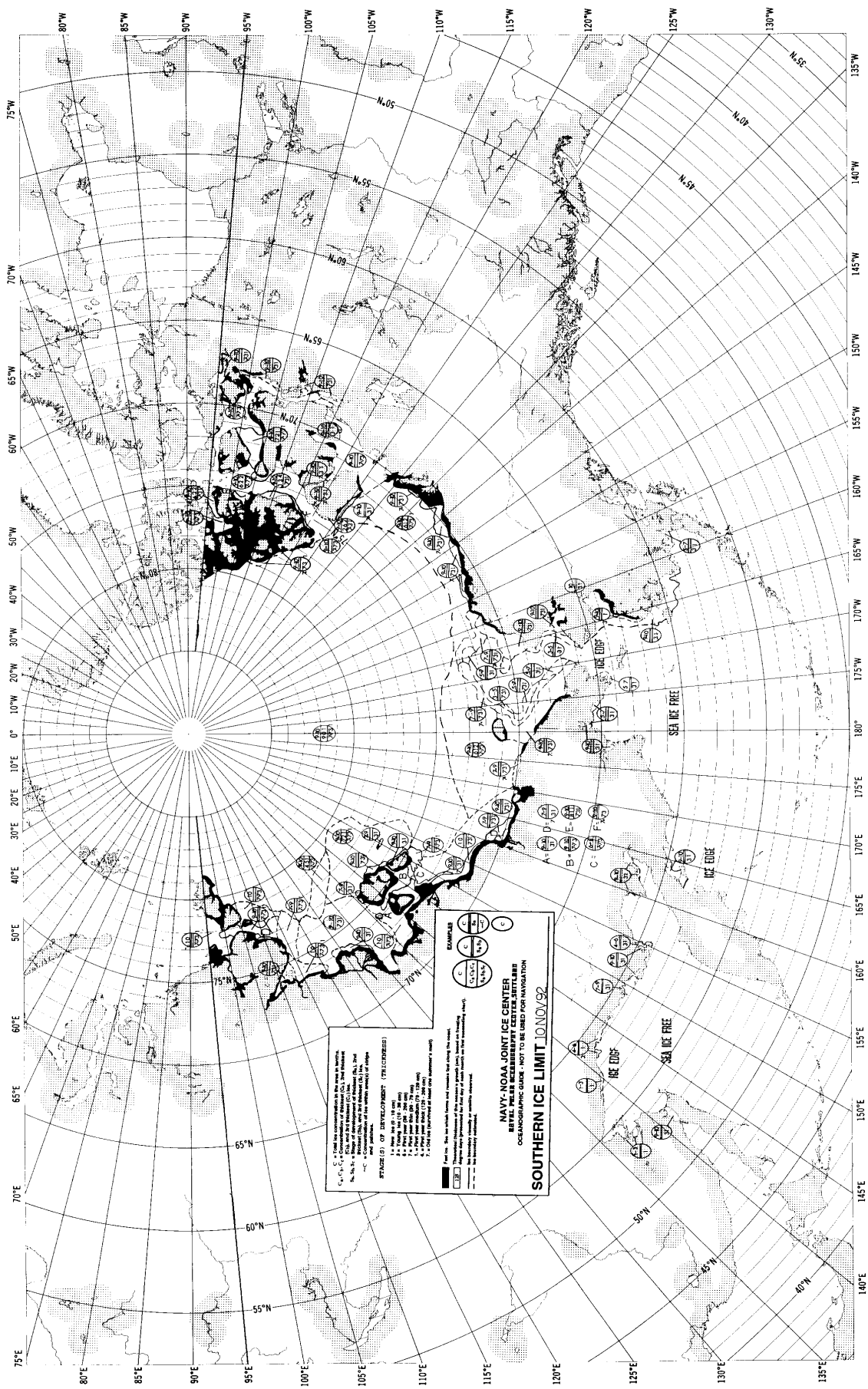


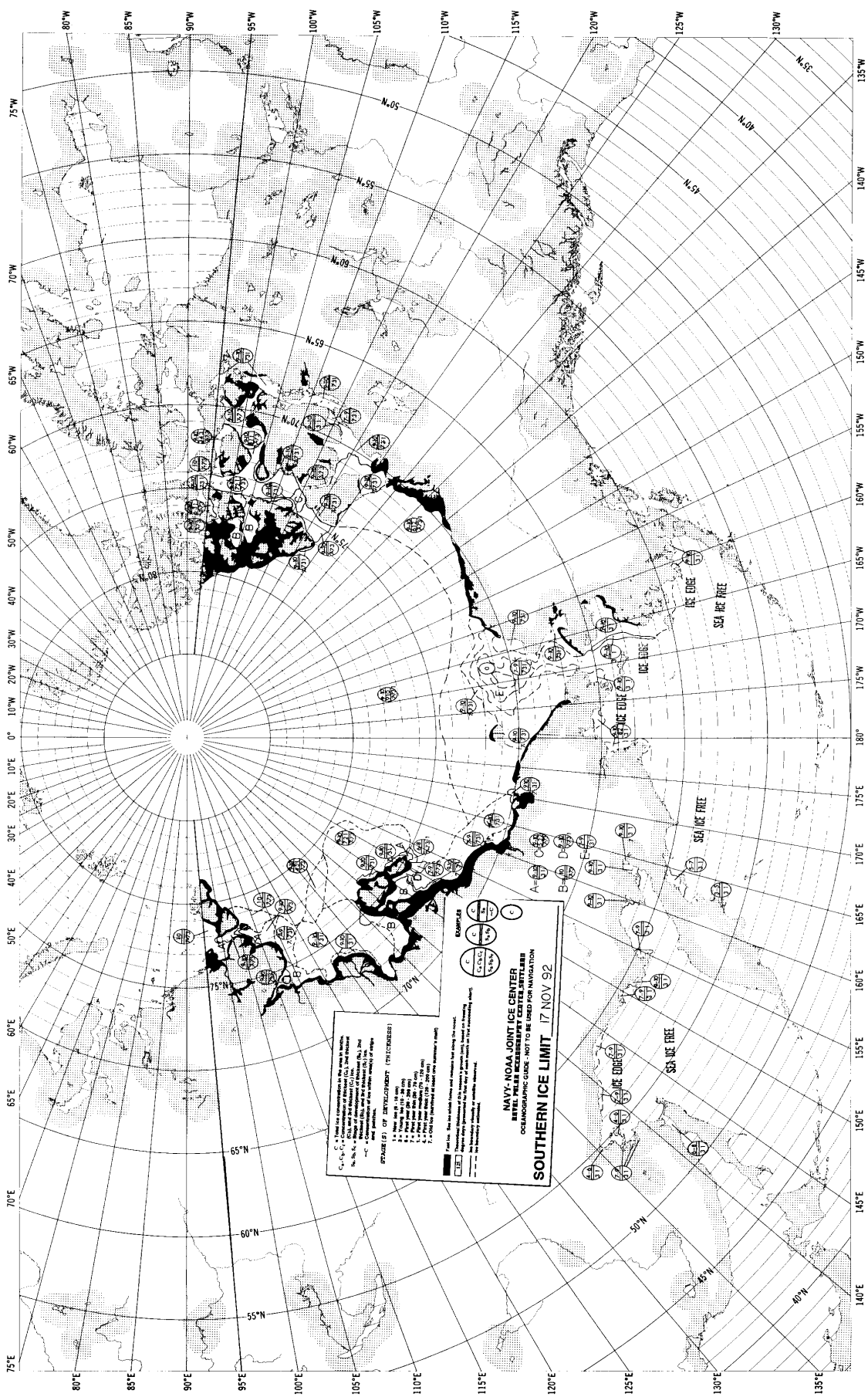


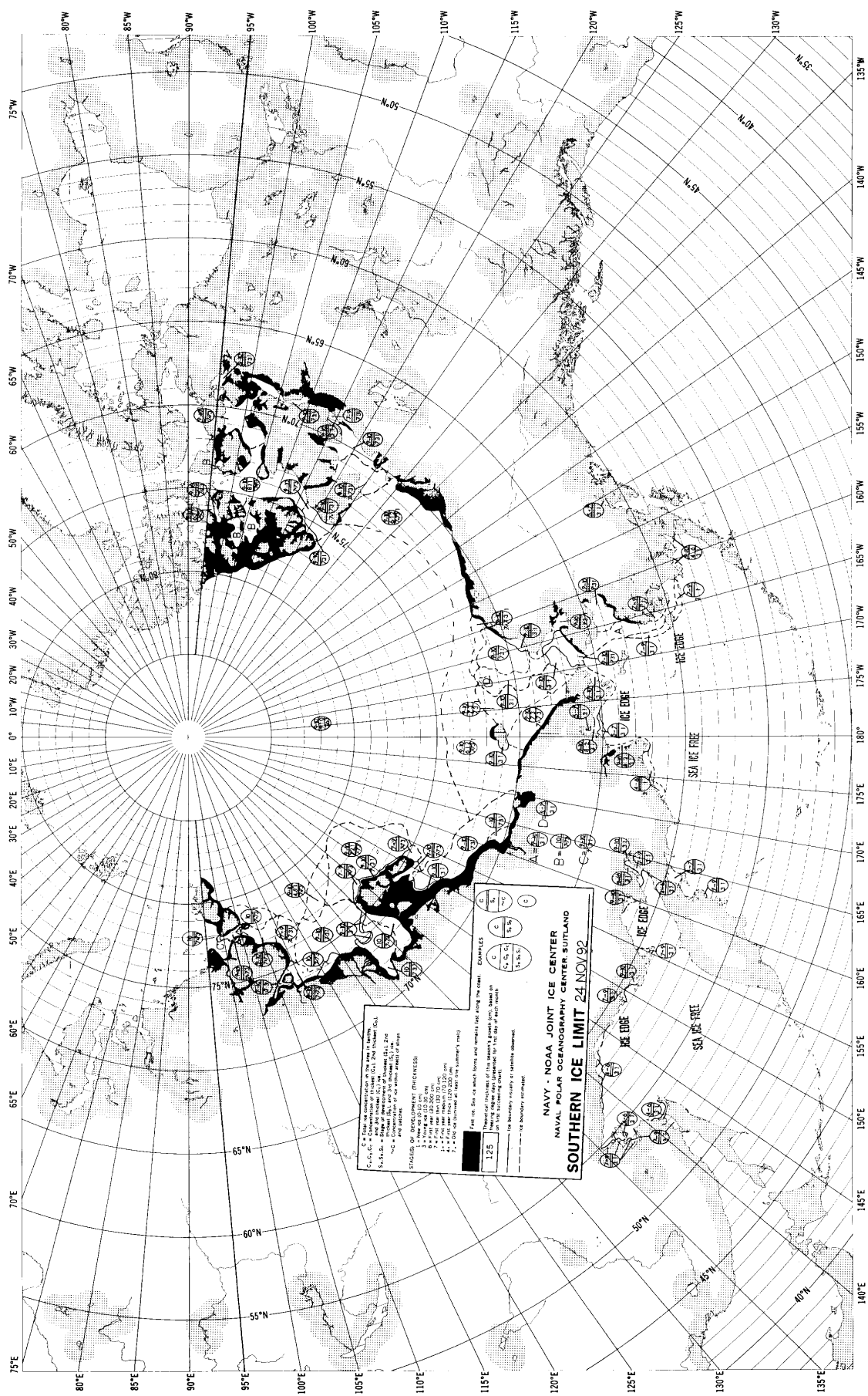


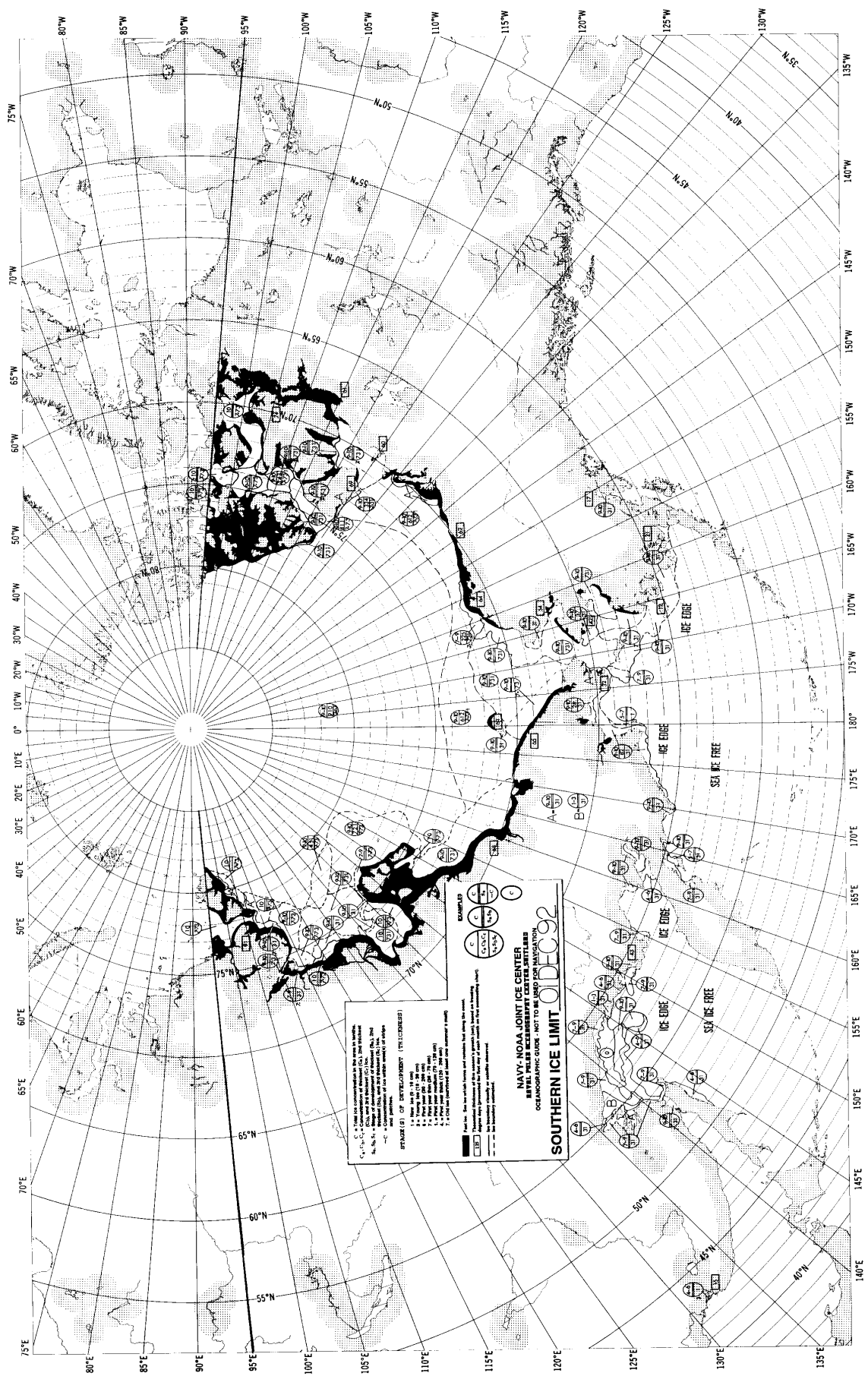












NAVY-NOAA JOINT ICE CENTERS
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SOUTHERN ICE LIMIT. ODE092

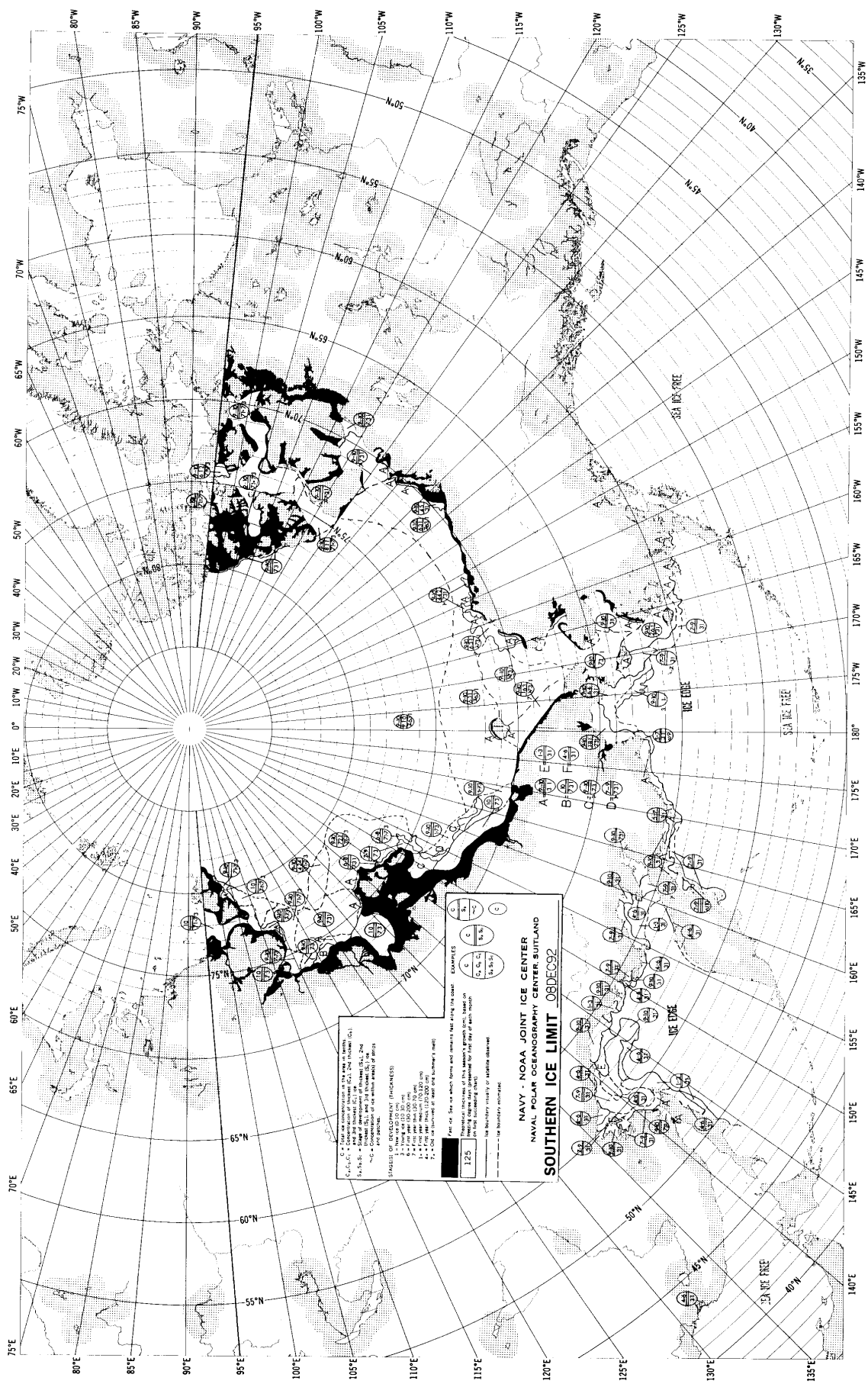
LEGEND

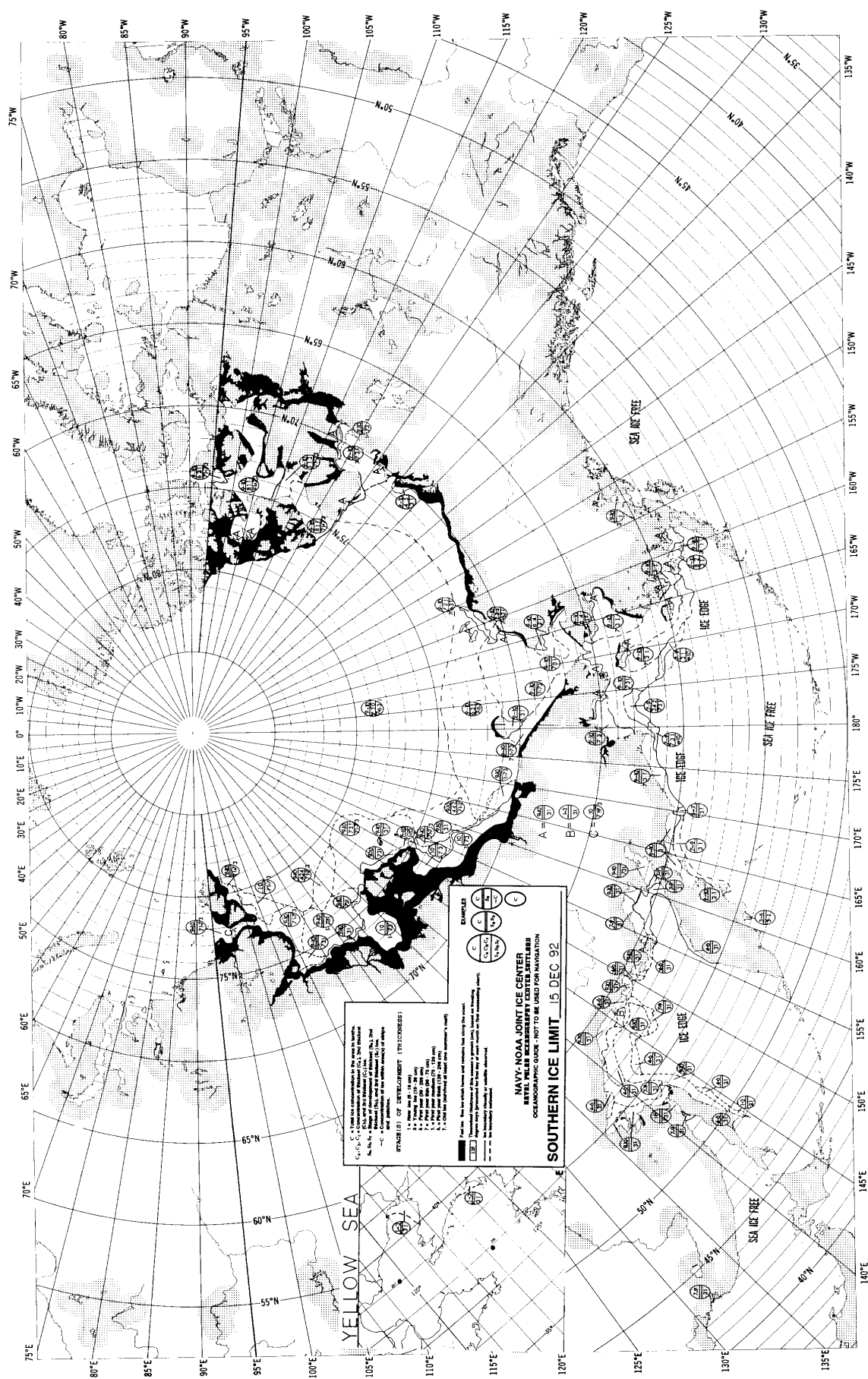
ICE CENTERS

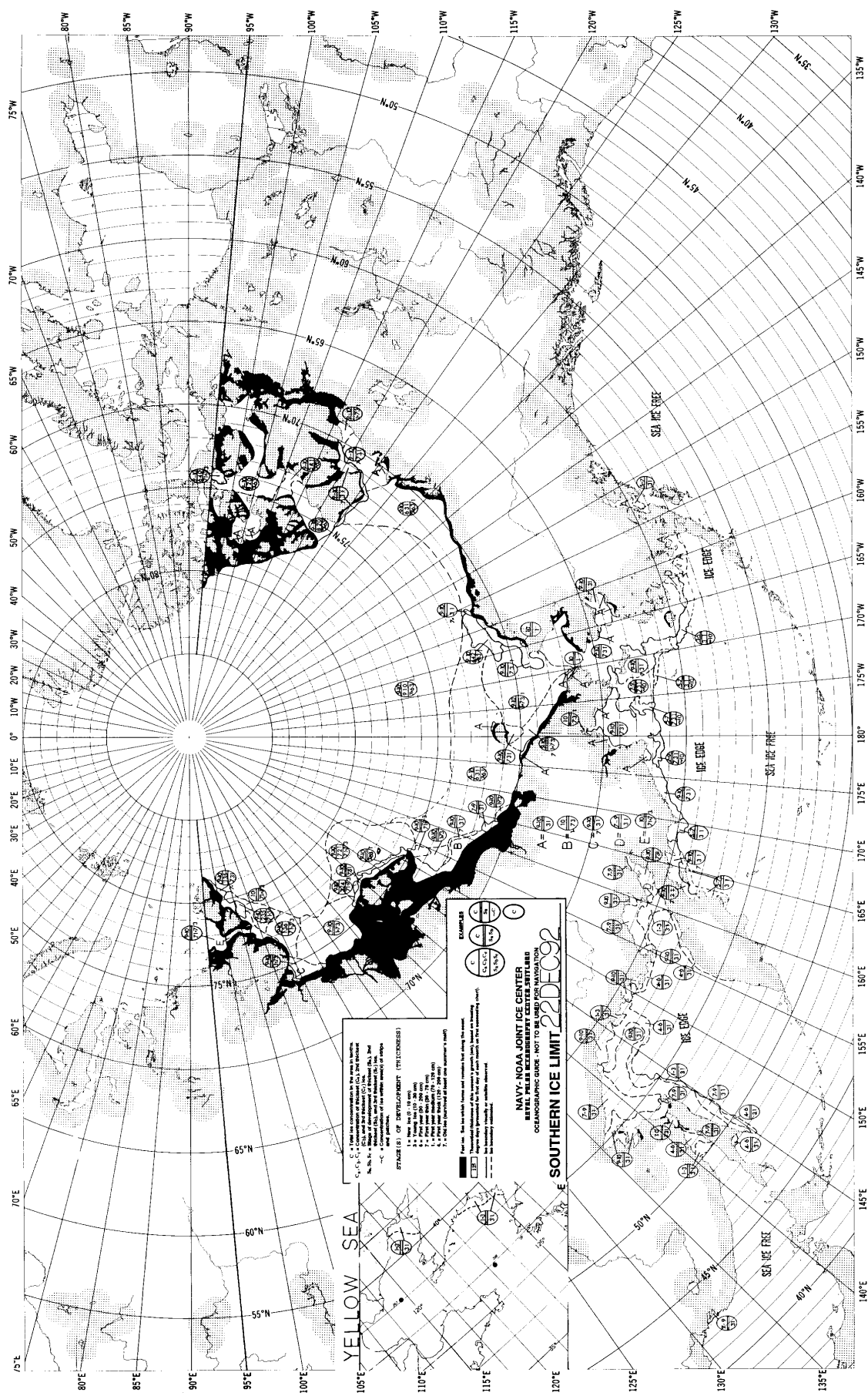
SPREADS OF DEVELOPMENT (RELIEFS)

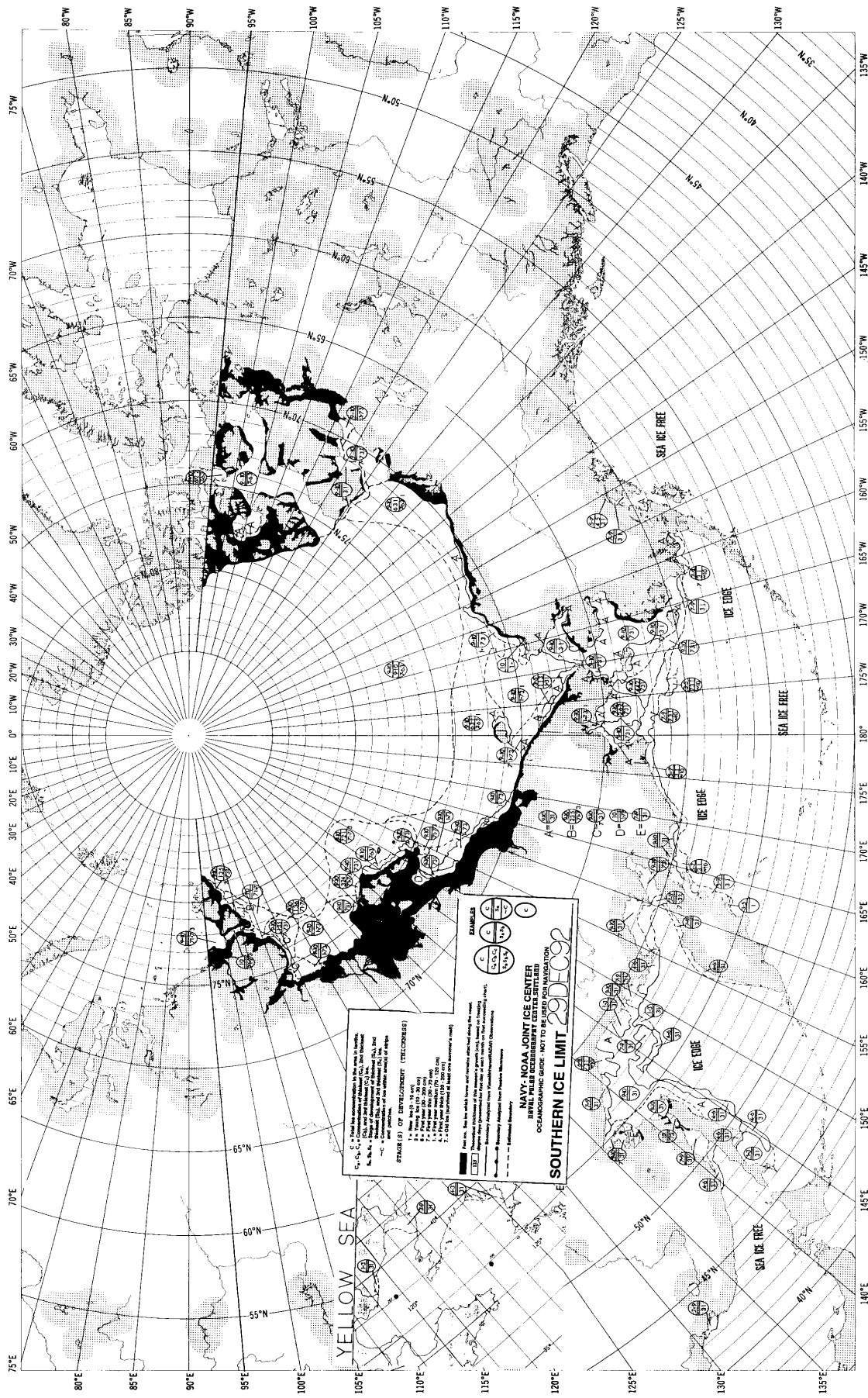
EXAMPLES

NOTES: The ice center numbers and symbols, listed along the coast, are for reference only. The ice center numbers are not to be used for navigation. The ice center numbers are not to be used for navigation. The ice center numbers are not to be used for navigation.









USCOMH-NOAA-ASHEVILLE, NC 5/93-275

TABLE 1. SATELLITE DATA UTILIZED DURING 1992 (ARCTIC)

Time Period		Satellite Remote Sensing			
From	To	Sensor Platform	Sensor Type	Spectral Region	Resolution Coverage
1-92	12-92	NOAA-10,11,12	AVHRR		
			HRPT/LAC		
			VIS	0.58-0.68 um	1 km Regional
			NIR	0.725-1.10 um	
			IR	10.5-12.5 um	
			GAC		
			VIS	0.58-0.68 um	4 km Global
			IR	10.5-12.5 um	
1-92	12-92	DMSP-F(10/11)	OLS		
			VIS	0.4-1.1 um	0.62 km Regional
			IR	10.2-12.8 um	0.62 km Regional
			SSM/I		
			PMW	1.55 cm	50 km Global
				(19.35 GHz)	
				0.81 cm	25 km Global
				(37.0 GHz)	
3-92	12-92	ERS-1	SAR		
			AMW	C-Band	240 m (FR) Local
				(5.3 GHz)	
					30 m (LR) Local

Abbreviations and Acronyms

AVHRR - Advanced Very High Resolution Radiometer
 AMW - Active Microwave
 cm - Centimeter
 FR - Full Resolution
 GAC - Global Area Coverage
 GHz - Giga-hertz
 HRPT - High Resolution Picture Transmission
 IR - Infrared
 km - Kilometer
 LAC - Local Area Coverage
 LR - Low Resolution
 NIR - Near Infrared
 OLS - Operational Line Scan System
 PMW - Passive Microwave
 SSM/I - Special Sensor Microwave Imager
 um - Micrometer
 VIS - Visible